

Performance Features

- Frequency band: 2~26GHz
 - Noise factor: 1.7dB
 - Gain: 15dB
 - Input/output return loss: >15dB/>11dB
- Output P1dB: 15dBm
 - Output IP3: 26dBm
 - Power supply: +5V@60mA
 - Chip size: 3.12mm×1.38mm×0.1mm

Overview

The CW462 is a GaAs MMIC ultra wideband low-noise amplifier chip with a frequency range covering 2 to 26 GHz and a typical noise figure of 1.7 dB throughout the band. the CW462 is powered by +5V.

Electrical performance table (TA=+25°C, VD=+5V)

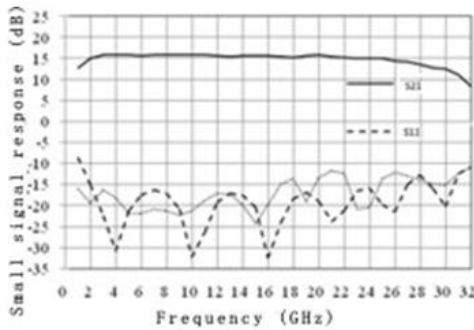
Indicators	Minimum value	Typical values	Maximum value	Unit
Frequency range		2~26		GHz
Noise factor	1.5	1.7	3	dB
Gain	14.5	15	15.9	dB
Input Return Loss	15	-	-	dB
Output Return Loss	11	-	-	dB

Usage limitation parameters: (Exceeding any of the above maximum limits may result in permanent damage.)

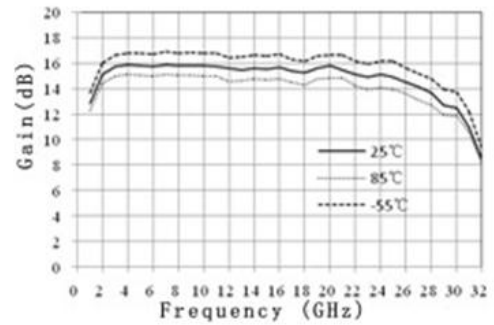
Input power	+23dBm
Control voltage	+9V
Storage temperature	-65°C~150°C
Operating temperature	-55°C~125°C

Typical curves:

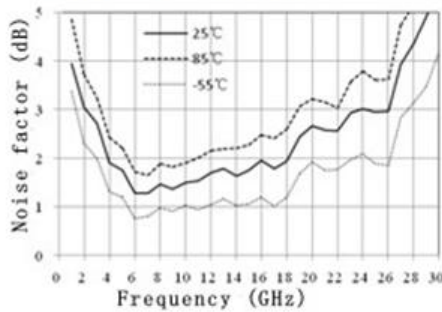
Small Signal Response (25°C)



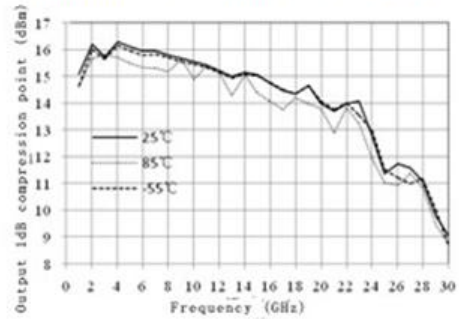
Gain Vs Temperature



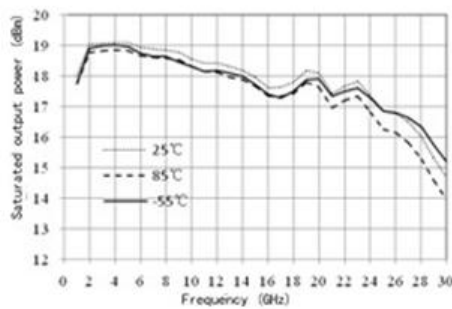
Noise factor Vs temperature



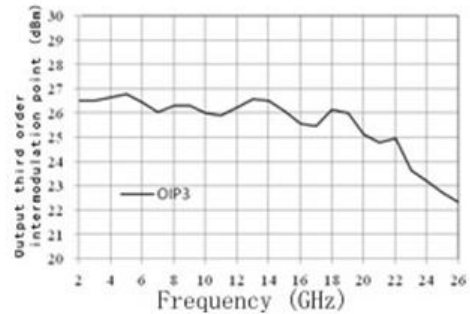
Output 1dB compression point Vs temperature



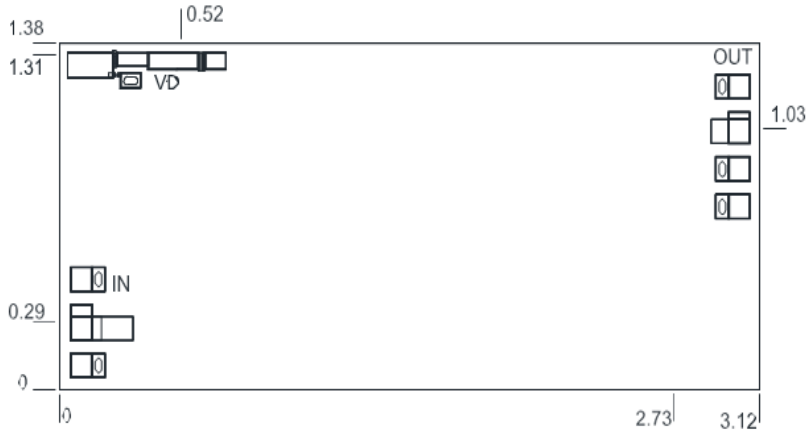
Output saturation power Vs Temperature



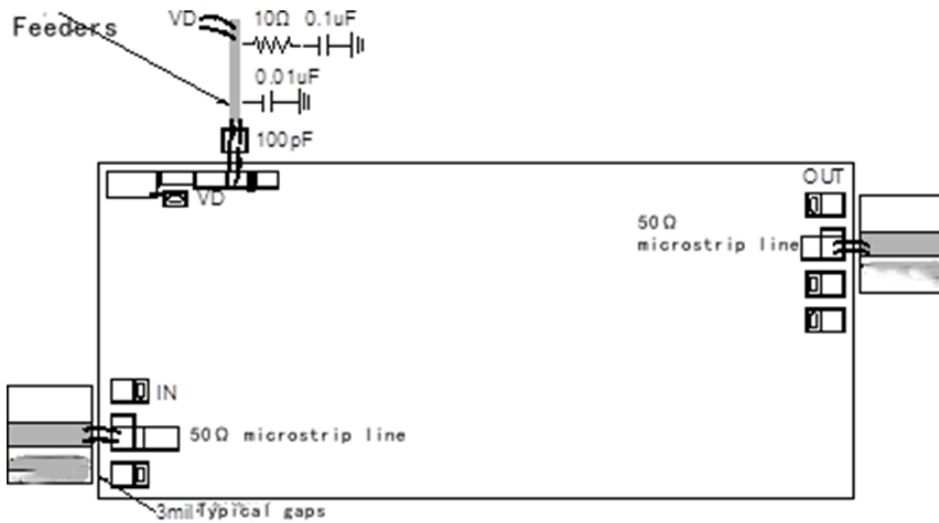
Output third-order intermodulation point (25°C)



Dimensional drawing: (unit mm)



Suggested assembly drawing:



Instructions for use:

Caution: Input and output have isolation capacitors

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

Cleaning treatment: Bare chips must be operated and used in a purified environment, and it is prohibited to use liquid cleaners to clean the chips.

Electrostatic protection: Please strictly comply with ESD protection requirements to avoid electrostatic damage to the device.

Routine operation: Please use vacuum chuck or precision pointed tweezers to pick up the chips. Avoid touching the chip surface with tools or fingers during the operation.

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

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