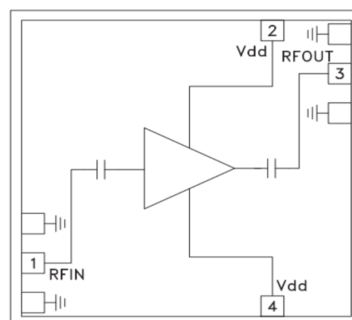
Performance Characteristics:

- Frequency band: 5~40GHz
- Noise factor: 2.3dB
- Gain: 11dB
- Input/output return loss: >14dB/>14dB
- Output P1dB: 12dBm
- Output IP3:26dBm
- Power Supply: +5V@43mA
- Chip size: 1.54mm x 1.38mm x 0.1mm

Functional Diagram



Product Description :

CW445 is a GaAs MMIC ultra wideband low noise amplifier chip, its frequency range covers 5~40GHz, the whole band noise factor typical value is 2.3dB.The CW445 is powered by +5V.

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

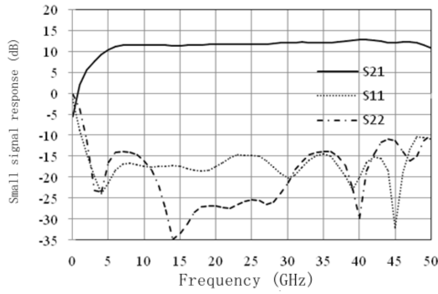
Index	Minimum	Typical value	Maximum value	Units
Frequency range		5~40		GHz
Noise factor	2	2.3	4.3	dB
Gain	-	11	12.8	dB
Input return loss	14	-	-	dB
Output return loss	14	-	-	dB

Use limit parameters: (Exceeding any of the above maximum limits risks permanent damage.)

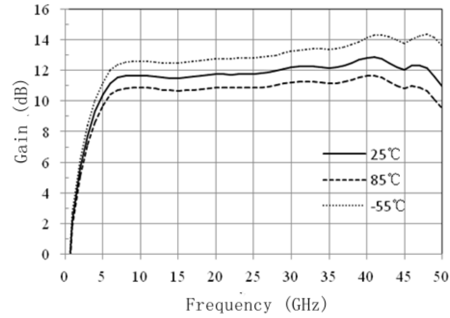
Input power	+23dBm
Control voltage	+9V
Storage temperature	-65℃~150℃
Service temperature	-55℃~125℃

Typical curve:

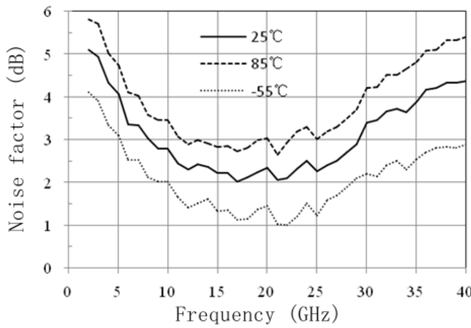
Small signal response（25℃）



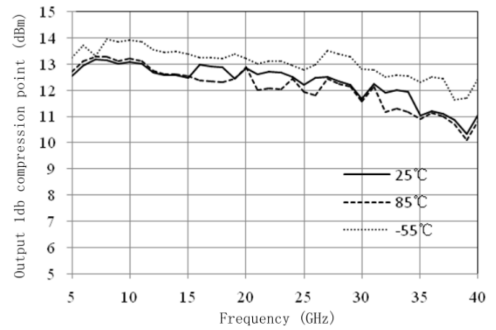
Gain Vs temperature



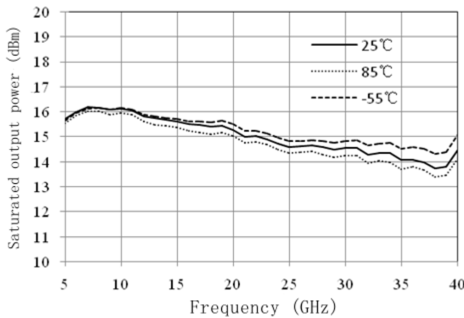
Noise factor Vs temperature



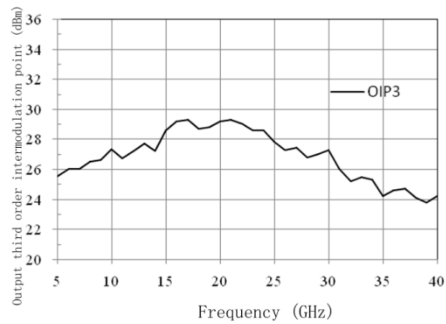
Output 1dB compression point Vs temperature



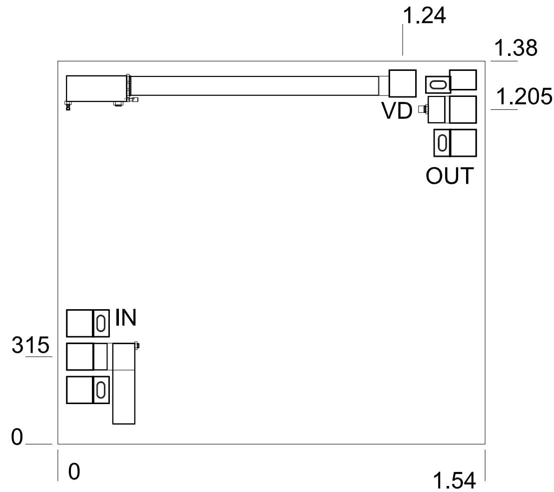
Output saturated power Vs temperature



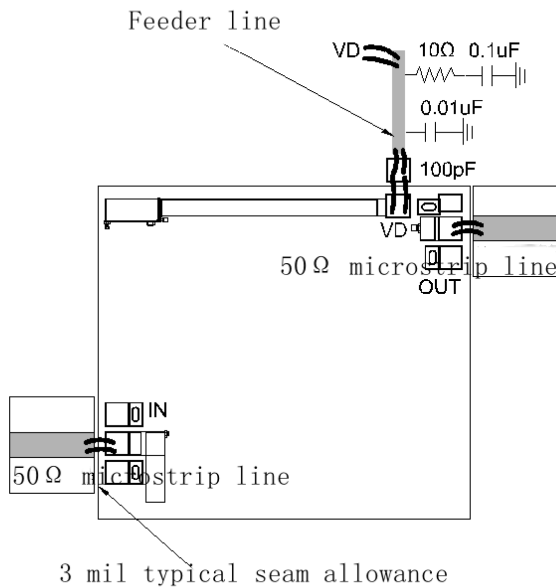
Output third order intermodulation point（25℃）



Size diagram : (unit mm)



Suggested assembly drawing :



Instructions :

Note: I/O has straight capacitance

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).