

Performance Features:

- Frequency band: 5~20GHz
- Gain: 23dB
- Output P1dB: 18.5dBm
- Saturated output power: 20dBm
- Output IP3:32dBm
- Input/output return loss: 18dB/11dB
- Power supply: +5V@105mA
- Chip size: 1.5mm x 1.4mm x 0.1mm

Product Description:

CW-DA451 is a GaAs MMIC driver amplifier chip with a frequency range covering 5~20GHz and an output P1dB of 18.5dBm over the entire band.

Electrical parameters:($T_A=25^{\circ}\text{C}$, $V_D=+5\text{V}$)

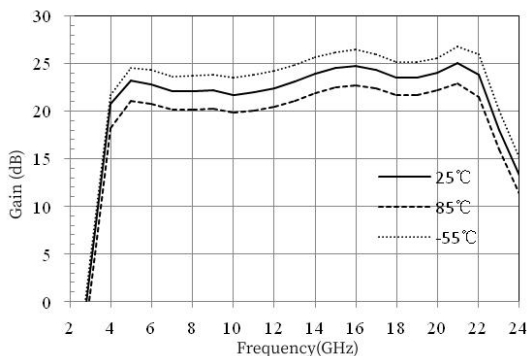
Index	Minimum	Typical value	Maximum value	Units
Frequency range	5~20			GHz
Gain	22	23	25	dB
Output P1dB	18.5	-	-	dBm
Saturated output power	20	-	-	dBm
Output IP3	32	-	-	dBm
Input return loss	-	18	-	dB
Output return loss	-	11	-	dB

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

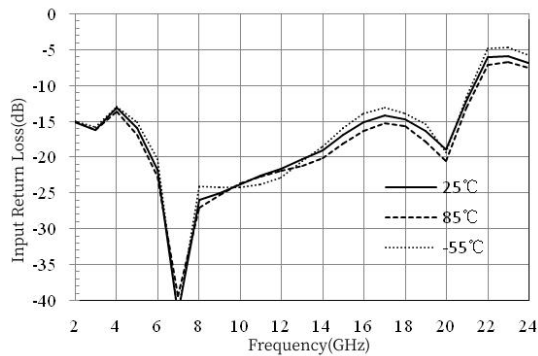
Input power	+10dBm
Voltage	+6V
Storage temperature	-65°C~150°C
Service temperature	-55°C~125°C

Typical curve:

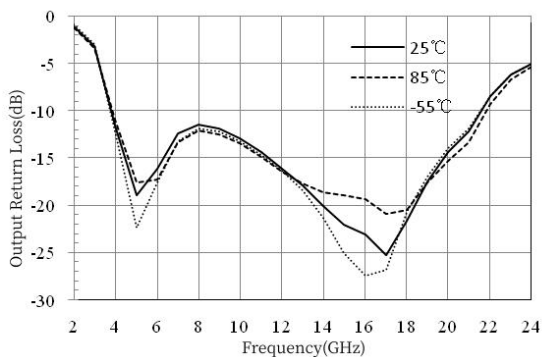
Gain Vs temperature



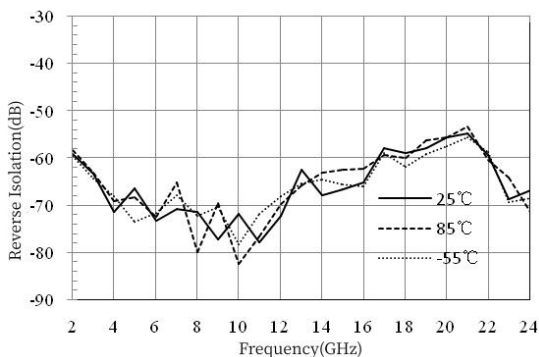
input return loss Vs temperature



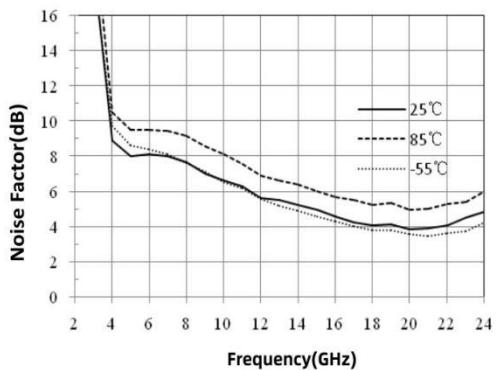
Output return loss Vs temperature



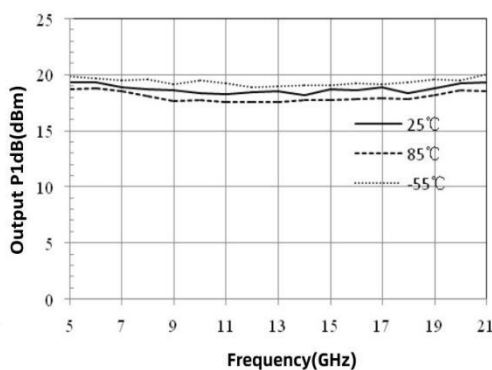
reverse isolation Vs temperature



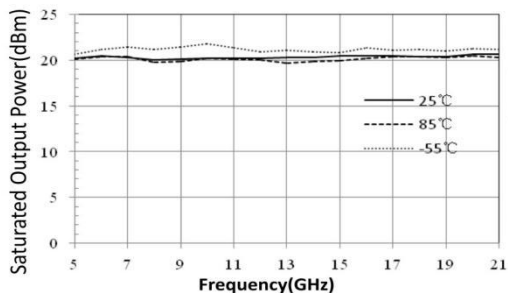
Noise factor Vs temperature



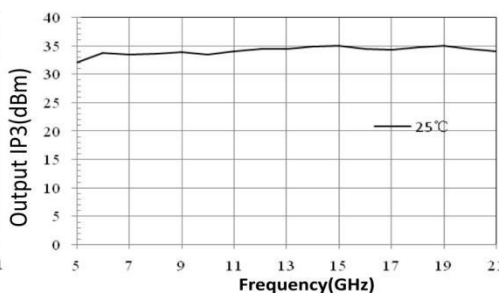
Output P1dB Vs temperature



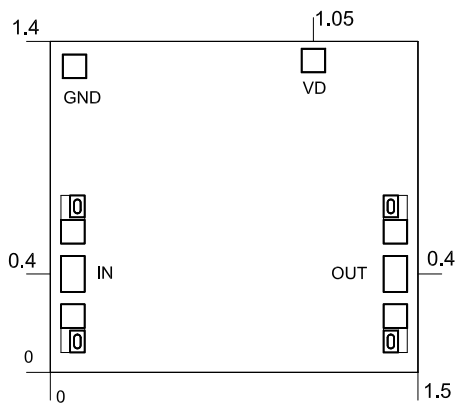
Saturated output power Vs temperature



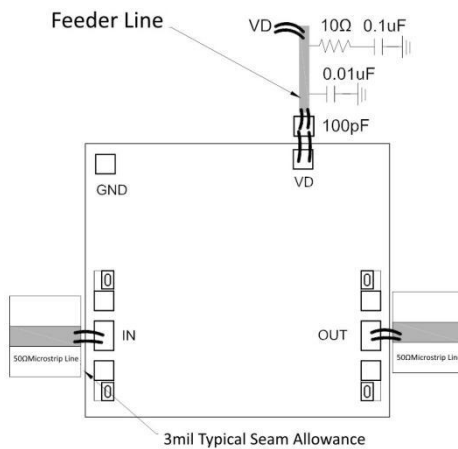
Output IP3 (25°C)



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).