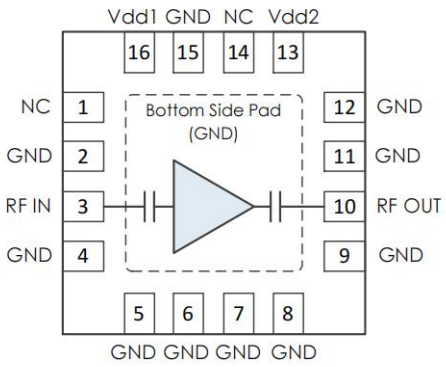
Performance Features

- Frequency band: 5GHz~20GHz
- Gain: 22dB
- Output P1dB: 18.5dBm
- Output IP3: 32dBm
- Input/output return loss: 18dB/11dB
- power supply: +5V@105mA
- Saturated output power: 20dBm
- 3mm QFN Package

Functional Diagram



Overview

The CW-DA1053 is a GaAs MMIC driver amplifier that covers a frequency range of 5 to 20 GHz with an output P1dB of 18.5 dBm over the entire band.

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

Indicators	Minimum value	Typical values	Maximum value	Unit
frequency range		5~20		GHz
Gain	21	22	24	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

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

Input power	+10dBm
Control voltage	+6V
Storage temperature	-65℃~150℃
Operating temperature	-55℃~125℃

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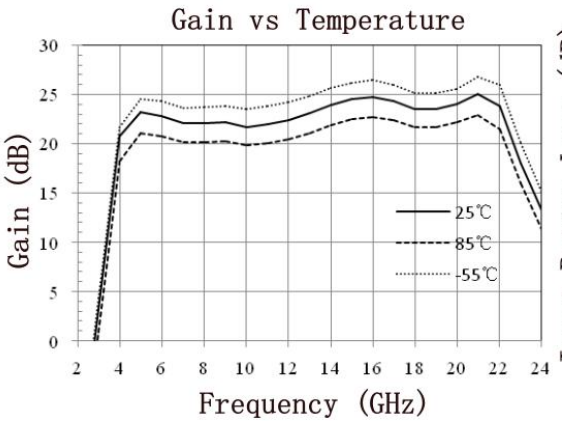
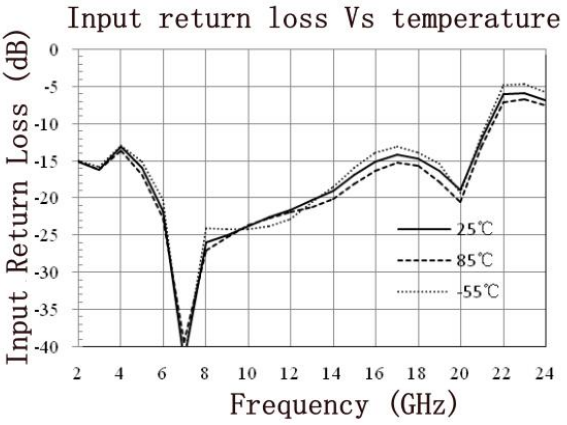
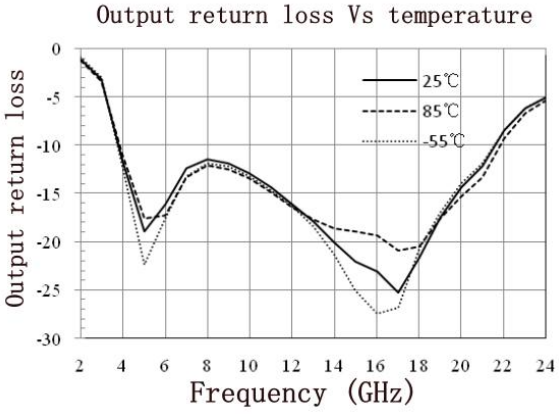
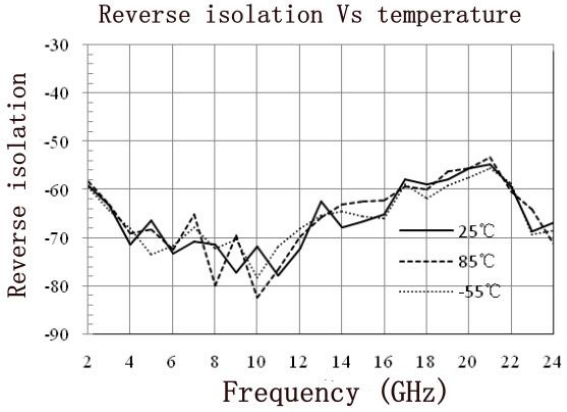
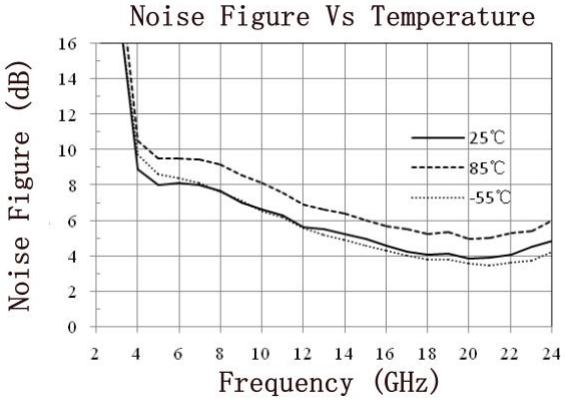
Typical curves:

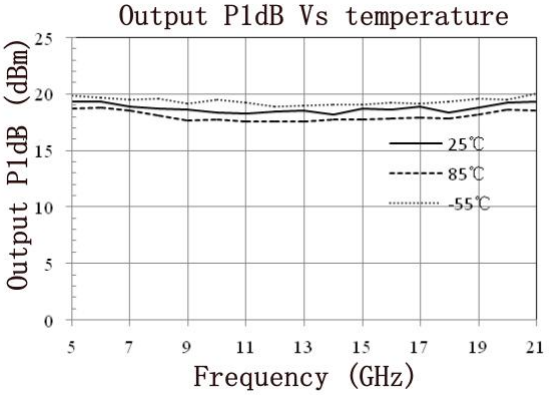












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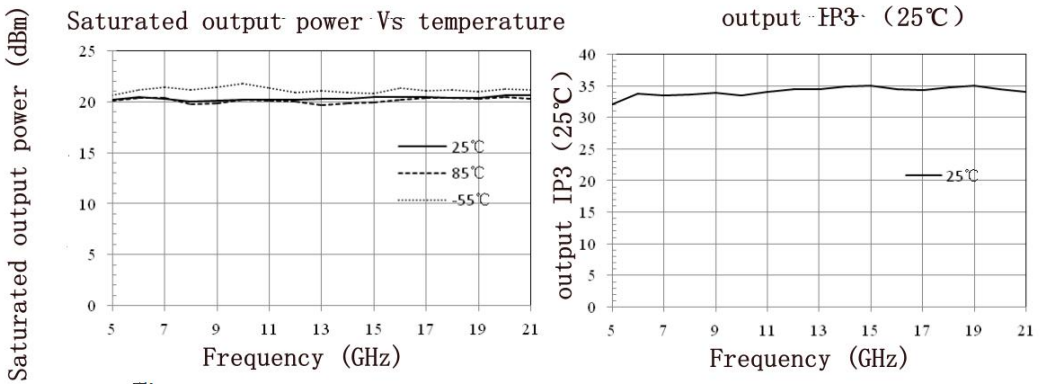
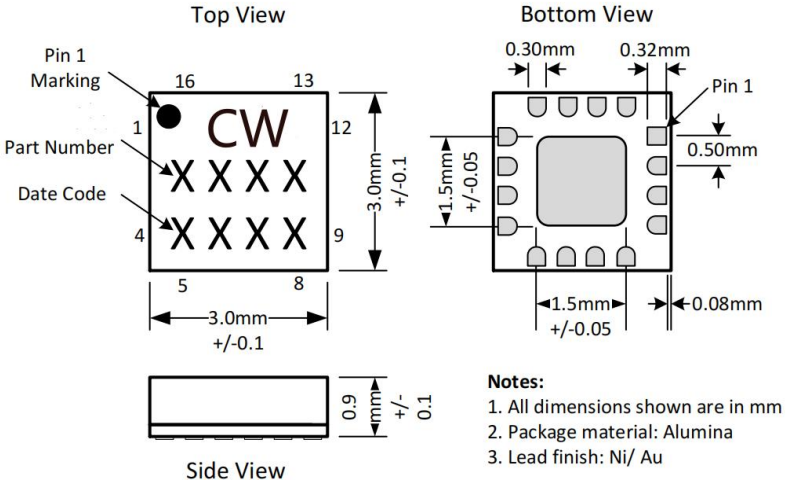
Typical curves:



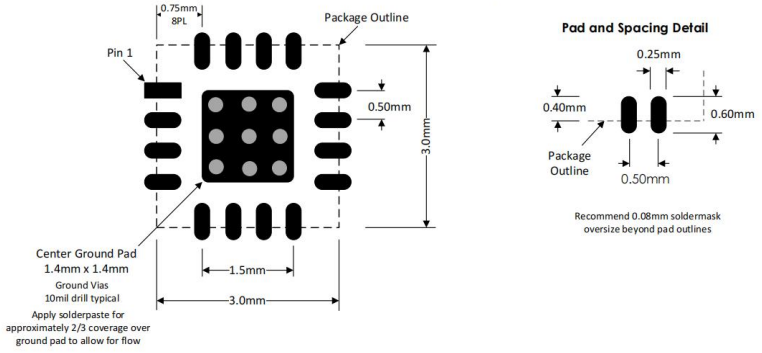
Package Details and Footprint

Package Drawing



Notes:
1. All dimensions shown are in mm
2. Package material: Alumina
3. Lead finish: Ni/ Au

Recommended Footprint



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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).

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