

GaAs monolithic integrated driver amplifier

2GHz~8GHz

**key indicator**

- Frequency range: 2GHz~8GHz
- Gain: 17dB
- Output P<sub>-1</sub> dB: 15dBm
- Single power supply operation: +5V@56mA
- Chip size: 1.74mm×1.22mm×0.1mm

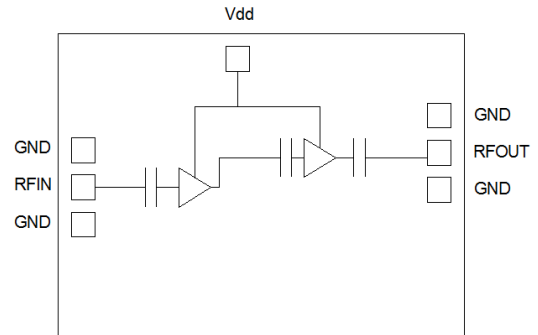
**typical application**

- Point-to-point communication
- Satellite Communications
- Military and aerospace
- Testing and measuring instruments
- radar

**Product Introduction**

The AY1562 amplifier chip works at 2GHz~8GHz and is made of GaAs technology. Under +5V@56mA power supply, it can provide 17dB gain and 15dBm output P<sub>-1</sub>dB. The chip uses an on-chip metallization process to ensure good grounding, and the back of the chip is metallized, which is suitable for eutectic sintering or conductive adhesive bonding processes.

**Functional block diagram**



**Electrical performance (T<sub>A</sub>=25°C, V<sub>D</sub>=+ 5V, I<sub>D</sub>=56mA, Z<sub>0</sub>=50Ω)**

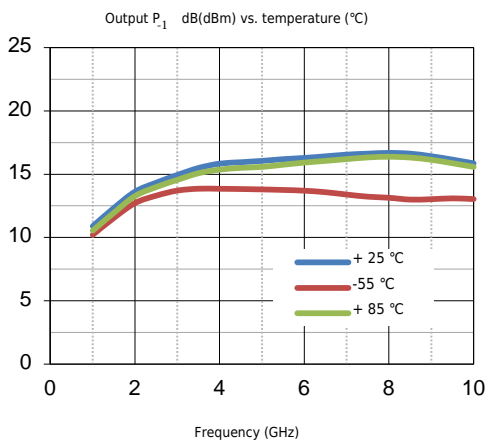
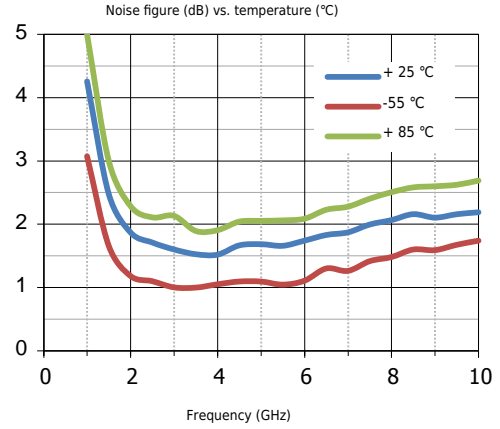
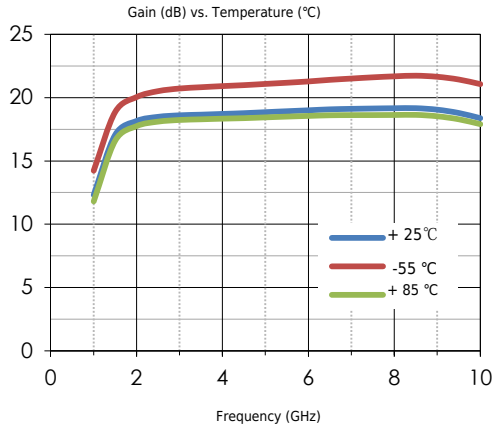
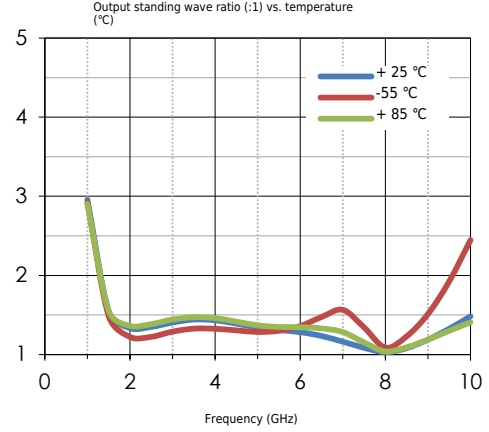
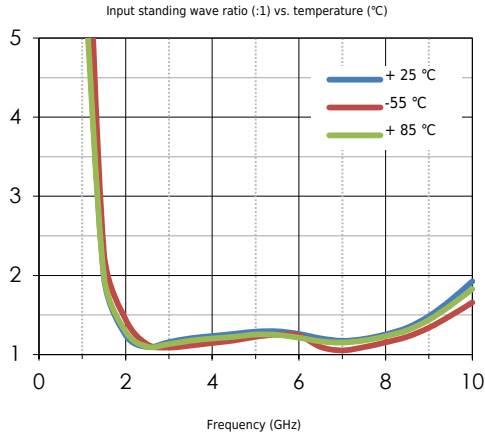
index	Minimum	Typical value	Max	unit
frequency	2 ~ 8			GHz
Small signal gain	-	17	-	dB
Small signal gain flatness	-	± 1.0	-	dB
Reverse isolation	-	- 35	-	dB
Input standing wave ratio	-	1.3	-	:one
Output standing wave ratio	-	1.4	-	:one
Output P <sub>-1</sub> dB	-	15	-	dBm
Operating Voltage	5	-	8	V
Working current	-	56	-	mA

**Absolute maximum rating**

Maximum input power	+18dBm	Operating temperature	-55 °C ~ + 85 °C
Channel temperature	150 °C	Storage temperature	-65 °C ~ + 150 °C
Max V <sub>D</sub>	+ 9V		

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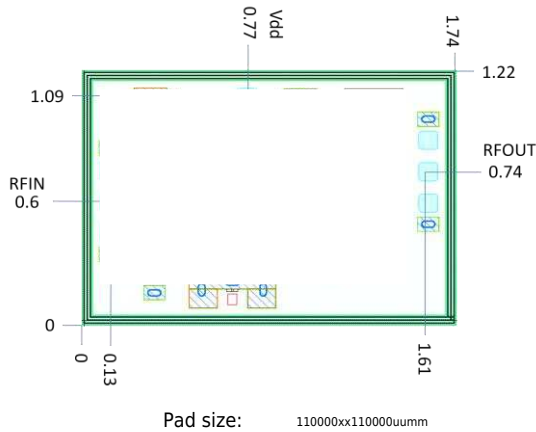
Typical test curve



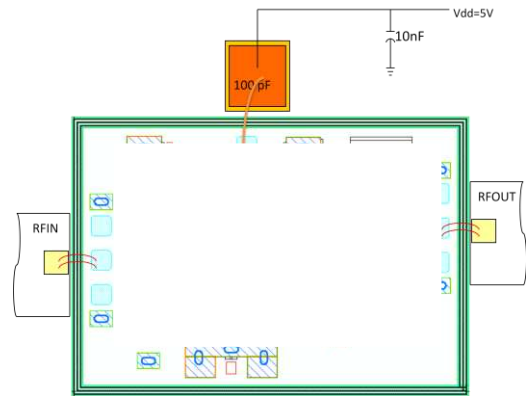
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**Shape and port size (mm)**



**Recommended assembly drawing**



#### Instructions for use

1. AY1562 only needs a single drain voltage +5V power supply;
2. When using this chip, the length of the input and output key alloy wires should be shortened as much as possible;
3. The back of the chip is RF grounded. It is recommended to use high thermal conductivity conductive adhesive for bonding.

#### Precautions

Gallium arsenide MMIC devices are susceptible to damage from electrostatic discharge. Precautions should be taken during transportation, assembly and testing.