# ACGI059064-P43

## C-band matched GaAs Device

Features:

Frequency: 5.9~6.4GHz

Saturated Output Power : $P_{Sat} \geq 43dBm$

PowerGain: Gain≥9dB

Add-Efficiency: PAE=36%(type)

Port matching: Zin/Zout=50Ω

Description:

ACGI059064-P43 is an internal matching GaAs device, which adopts advanced co-planar internal matching MCM and thin film circuit technology. The typical working frequency range is 5.9~6.4GHz. This device can be used in different RF/Microwave system and subsystem. The high output power level, high efficiency and wide operating temperature range can make application very flexible.

Maximun Ratings (TC=25℃， Not recommended working under this condition):

|  | Symbol | Value | Unit |
|---|---|---|---|
| Voltage between source and drain | $V_{ds}$ | 11 | V |
| Voltage between gate and source | $V_{gs}$ | -3 | V |
| Storage Temperature Range | $T_{stg}$ | -65 to +150 | ℃ |
| Drain and Source Channel Temperature | $T_{ch}$ | 150 | ℃ |

## Electrical Characteristics：

| | Symbol | Test condition | Value | | | Unit |
|---|---|---|---|---|---|---|
| | | | Min | Typ | Max | |
| Drain Current | Idsr | Vds=10V CW. Pin: 34dBm Freq: 5.9~6.4GHz | - | 5 | - | A |
| Saturated output power | Psat | | 43 | - | - | dBm |
| Gain | Gp | | 9 | - | - | dB |
| Add-Efficiency | PAE | | - | 36 | - | % |
| Gain Flatness | ΔG | | -0.8 | - | +0.8 | dB |

## Typical Curve:



P$_{sat}$ vs Freq

PAE vs Freq
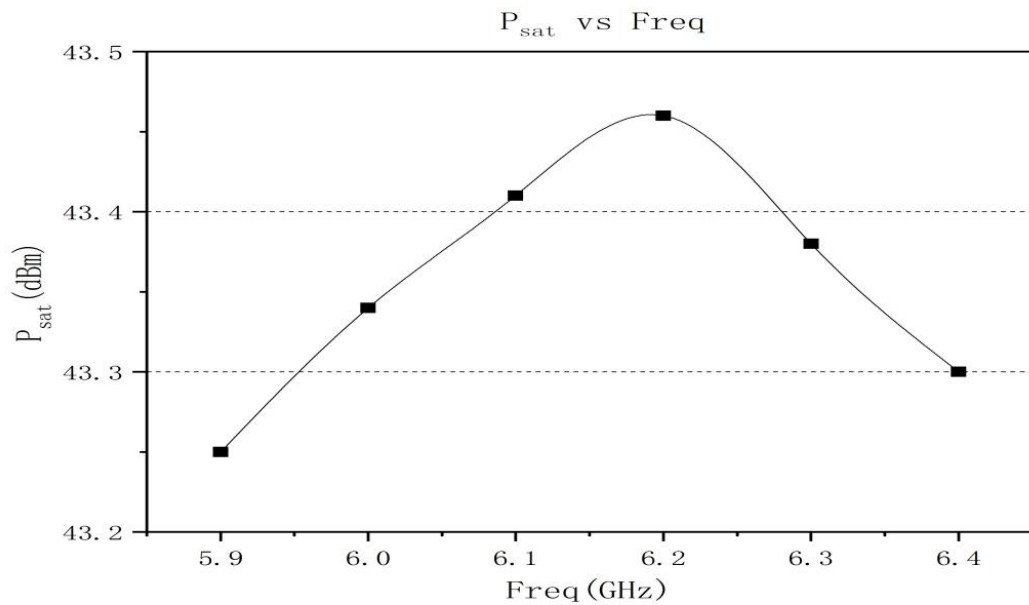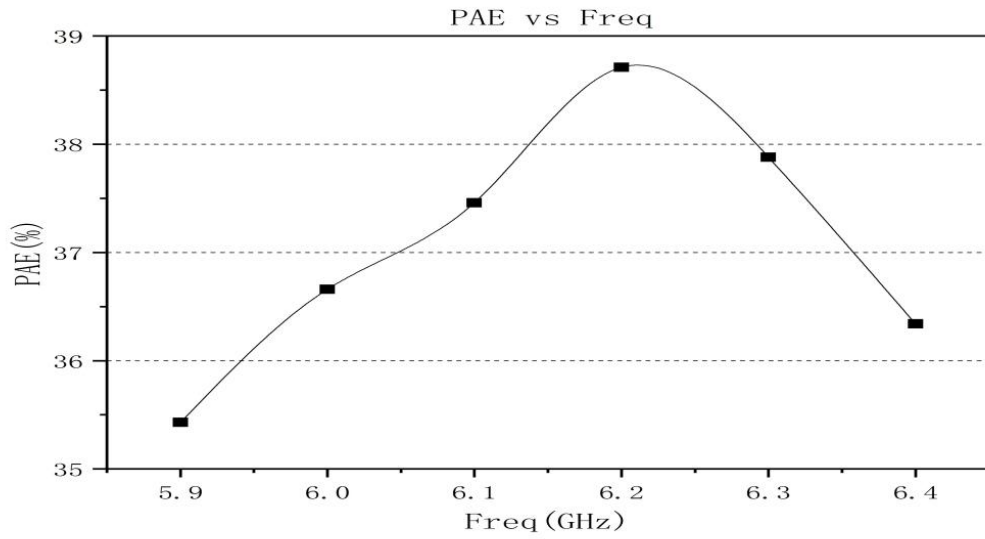
## Application Circuit:
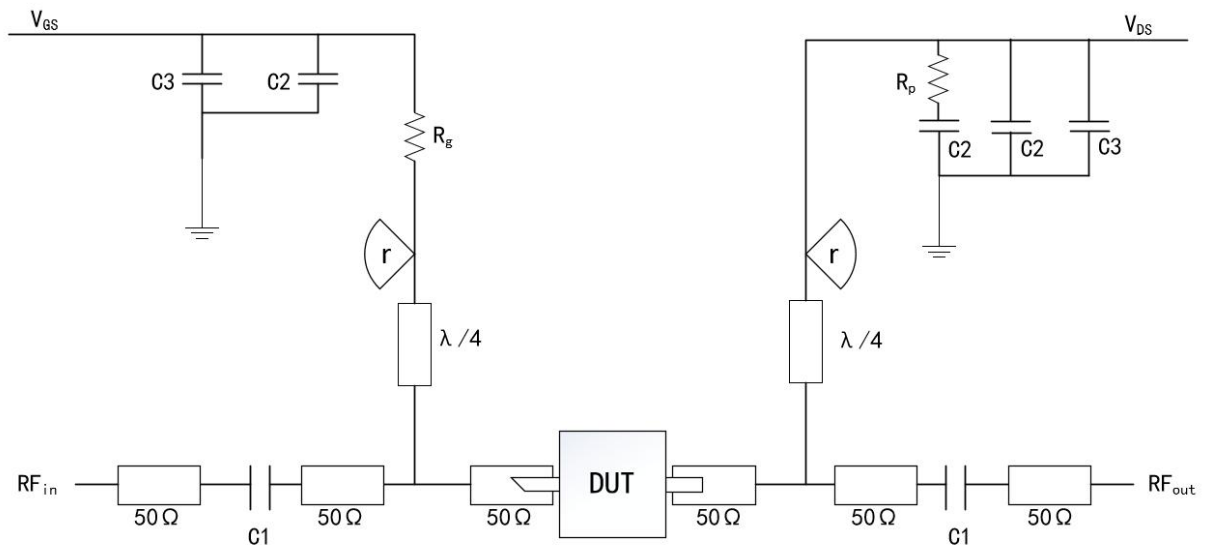


## DUT：Device to be tested

C1:3pF                                          Rp:51Ω

C2:1000pF                                    Rg:15Ω

C3:100uF                                      r(radius)≈4.5mm(Rogers5880, 20mil)

## ESD Level:

| ESD | Class III | 2000V |
|---|---|---|

## Outline:
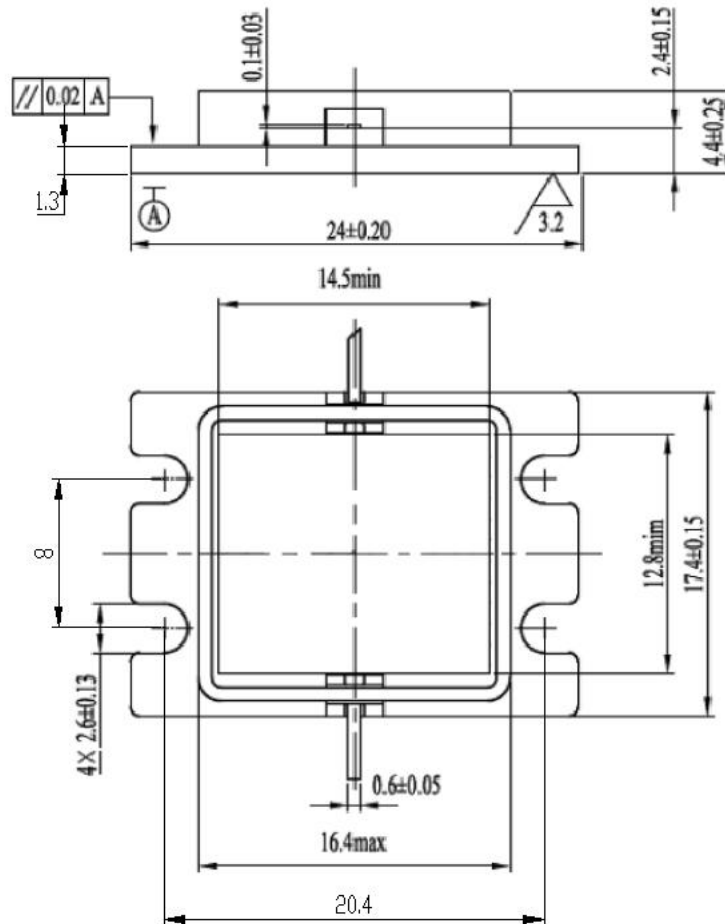


## Precautions for use:

- Pay attention to drying transportation and storage.

- Pay attention to anti-static during chip use and assembly, and wear grounding anti-static bracelet.

- When powering up, first apply grid power then add leakage.