



# ACGI058065-P36-1

## C-band matched GaAs Device

### Features:

- Frequency: 5.85~6.45GHz
- 1dB Output Power :  $P_{1dB} \geq 36\text{dBm}$
- PowerGain:  $\text{Gain} \geq 8.5\text{dB}$
- Add-Efficiency:  $\text{PAE} = 30\%$ (type)
- Port matching:  $Z_{in}/Z_{out} = 50\Omega$

### Description:

ACGI058065-P36-1 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 5.85~6.45GHz. 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.

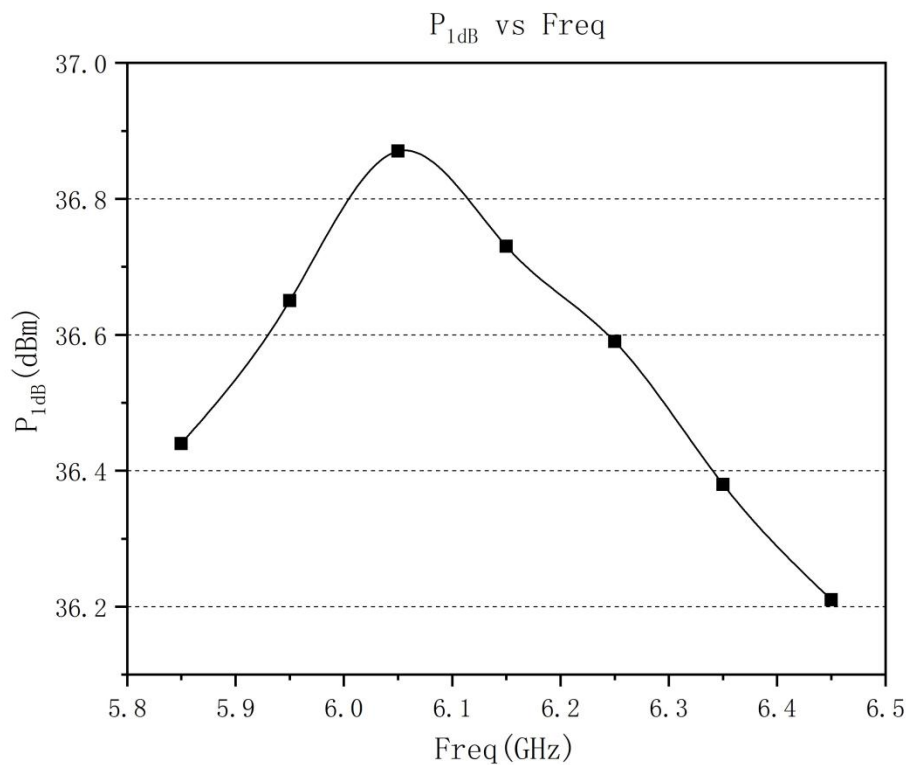
### Maximun Ratings (TC=25°C, Not recommended working under this condition):

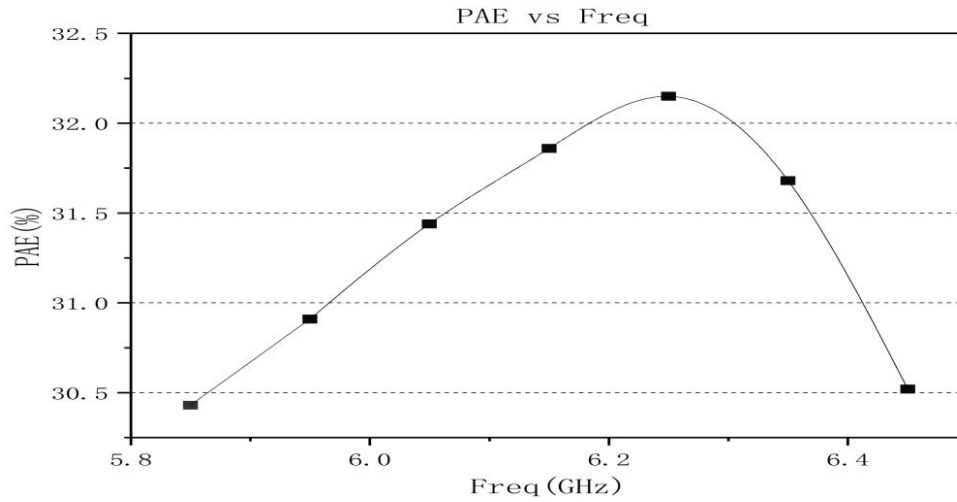
	Symbol	Value	Unit
Voltage between source and drain	$V_{ds}$	11	V
Voltage between gate and source	$V_{gs}$	-3	V
Storage Temperature Range	$T_{stg}$	-65 to +175	°C
Drain and Source Channel Temperature	$T_{ch}$	175	°C

## Electrical Characteristics:

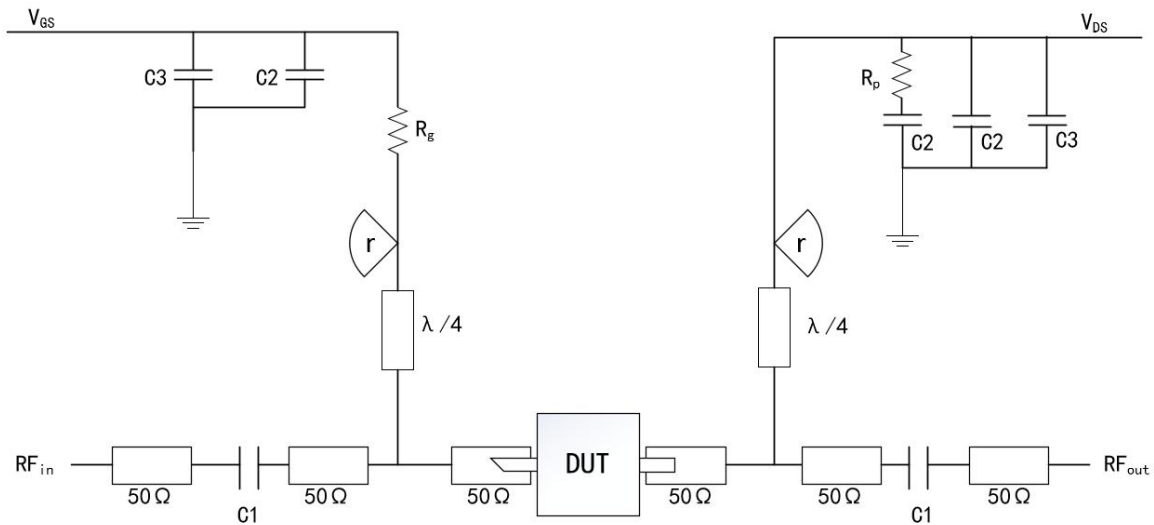
	Symbol	Test condition	Value			Unit
			Min	Typ	Max	
Drain Current	$I_{dsr}$	Vds=10V CW. Pin: 27.5dBm Freq: 5.85~6.45GHz	-	1.2	-	A
1dB output power	$P_{1dB}$		36	-	-	dBm
Gain	$G_p$		8.5	-	-	dB
Add-Efficiency	PAE		-	30	-	%
Gain Flatness	$\Delta G$		-0.8	-	+0.8	dB

## Typical Curve:





## Application Circuit:



### DUT: Device to be tested

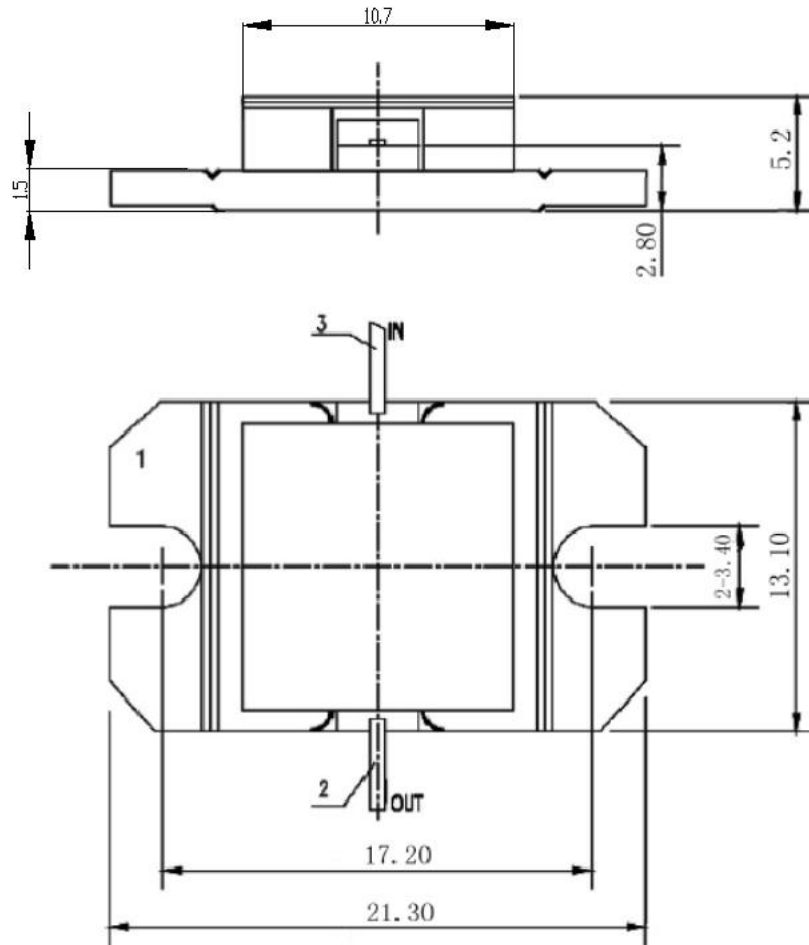
C1:3pF  
C2:1000pF  
C3:100uF

R<sub>p</sub>:51Ω  
R<sub>g</sub>:15Ω  
r(radius)≈4.5mm(Rogers5880, 20mil)

## ESD Level:

ESD	Class III	2000V
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## 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.