



## ACGI085096-P39-1

X-band matched GaAs Device

### Features:

Frequency: 8.5~9.6GHz

1dB Output Power :  $P_{1dB}=39dBm$ (type)

PowerGain: Gain=7.5dB(type)

Efficiency:  $\eta=29\%$ (type)

Port matching:  $Z_{in}/Z_{out}=50\Omega$

### Description:

ACGI085096-P39-1 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 8.5~9.6GHz. 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.

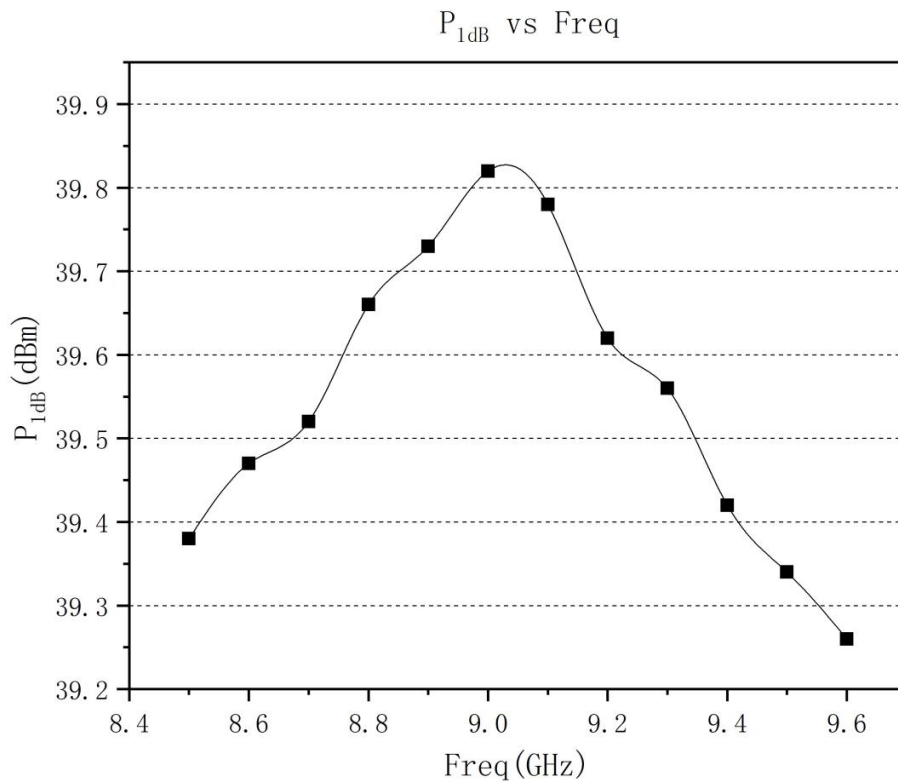
Maximun Ratings ( $T_C=25^\circ C$ , Not recommended working under this condition):

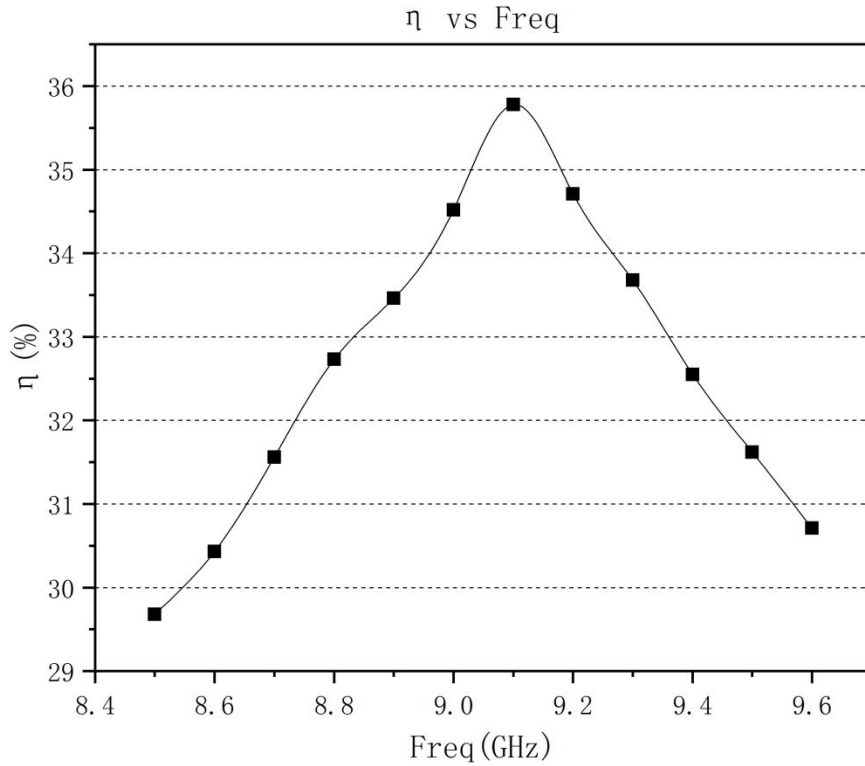
	Symbol	Value	Unit
Voltage between source and drain	$V_{ds}$	11	V
Voltage between gate and source	$V_{gs}$	-3	V
Storage Temperature Range	$T_{stg}$	-65 to +175	$^\circ C$
Drain and Source Channel Temperature	$T_{ch}$	175	$^\circ C$

## Electrical Characteristics:

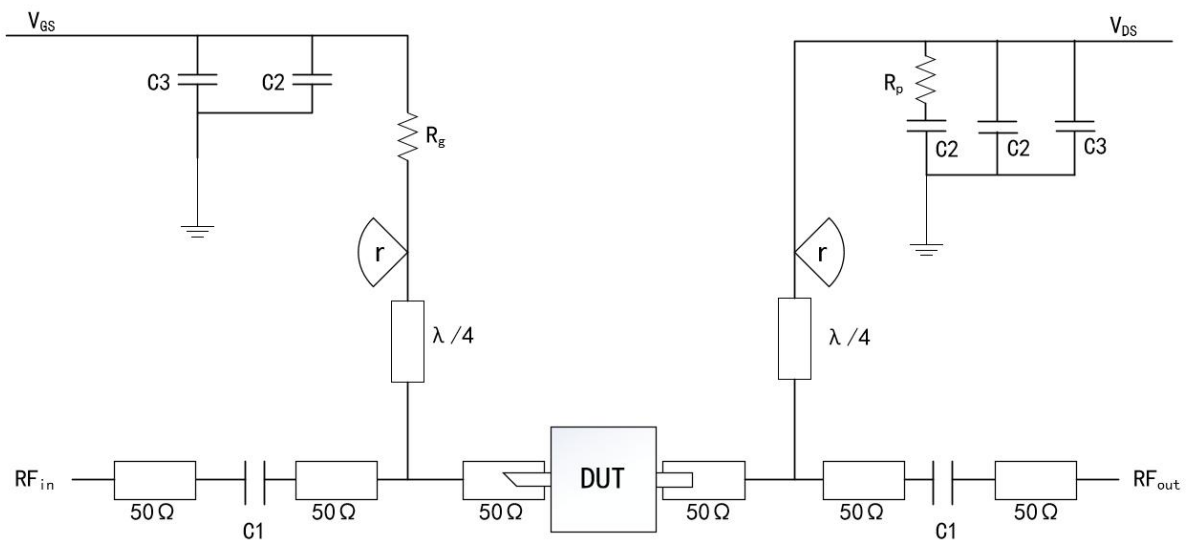
	Symbol	Test condition	Value			Unit
			Min	Typ	Max	
Drain Current	I <sub>dsr</sub>	V <sub>ds</sub> =10V CW. P <sub>in</sub> : 31.5dBm Freq: 8.5~9.6GHz	-	2.3	-	A
1dB output power	P <sub>1dB</sub>		-	39	-	dBm
Gain	G <sub>p</sub>		-	7.5	-	dB
Efficiency	η		-	29	-	%
Gain Flatness	ΔG		-0.8	-	+0.8	dB

## Typical Curve:





## Application Circuit:



### DUT: Device to be tested

C1:1pF  
C2:1000pF  
C3:100uF

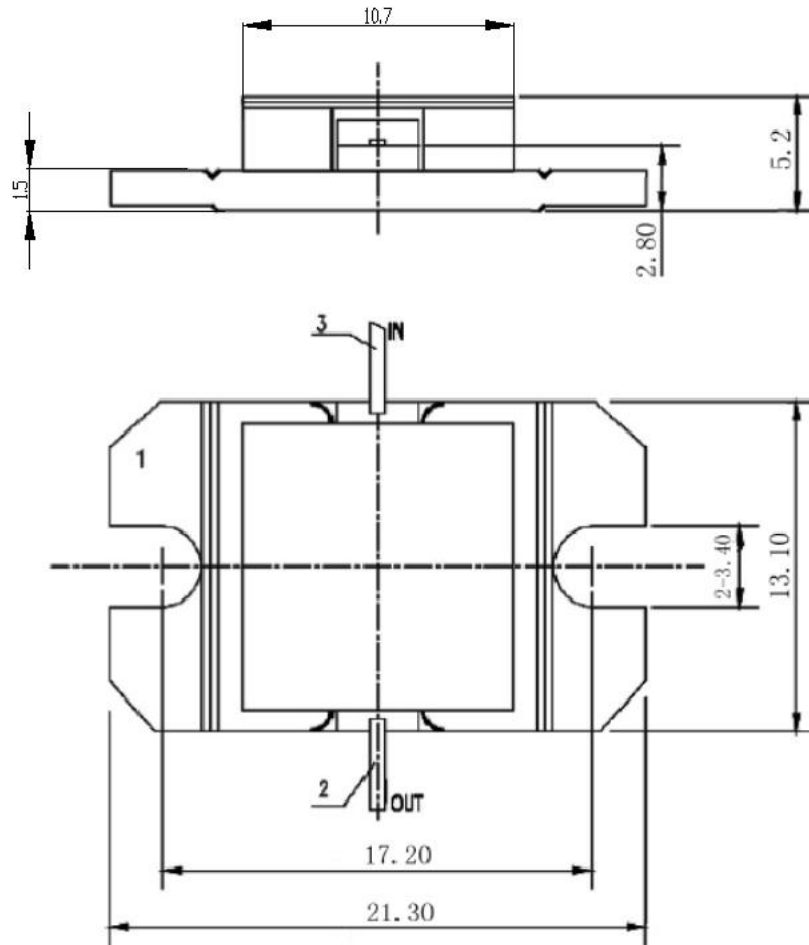
Rp:51Ω  
Rg:15Ω  
r(radius)≈3.5mm(Rogers5880, 20mil)

If you need more detailed product information, please contact our marketing personnel or designers.  
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## 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.