



# ACGI044050-P41

## C-band matched GaAs Device

### Features:

Frequency: 4.4~5GHz

Saturated Output Power :  $P_{sat} \geq 41\text{dBm}$

PowerGain:  $\text{Gain} \geq 10\text{dB}$

Efficiency:  $\eta = 35\%$ (type)

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

### Description:

ACGI044050-P41 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 4.4~5GHz. 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.

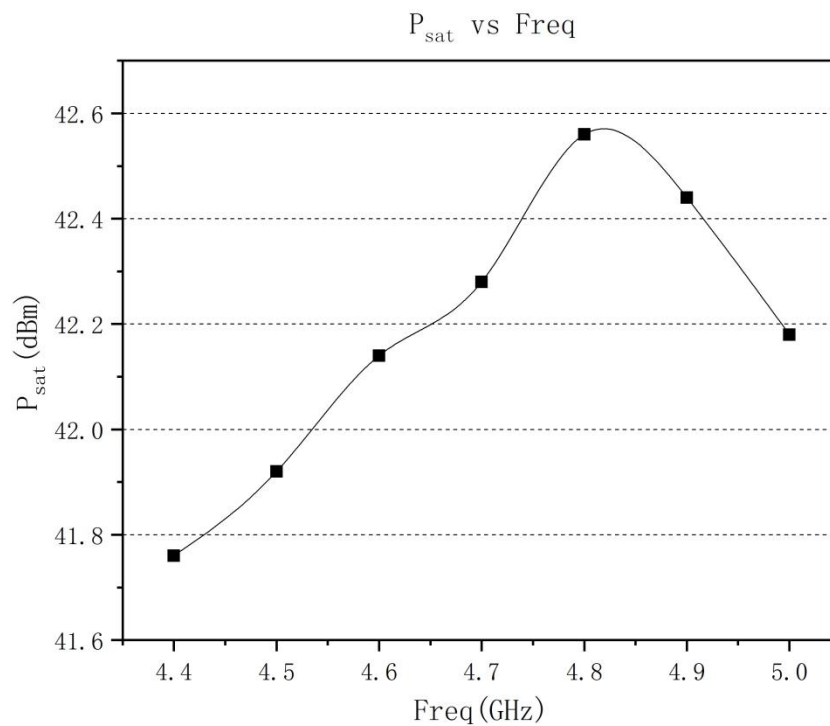
Maximun Ratings ( $T_C = 25^\circ\text{C}$ , Not recommended working under this condition):

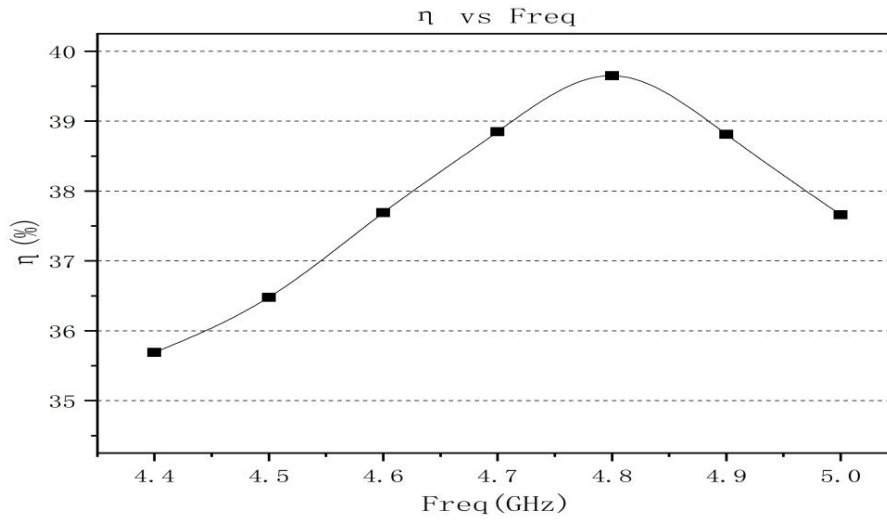
	Symbol	Value	Unit
Voltage between source and drain	$V_{ds}$	11	V
Voltage between gate and source	$V_{gs}$	-3	V
Storage Temperature Range	$T_{stg}$	-65 to +150	$^\circ\text{C}$
Drain and Source Channel Temperature	$T_{ch}$	150	$^\circ\text{C}$

## Electrical Characteristics:

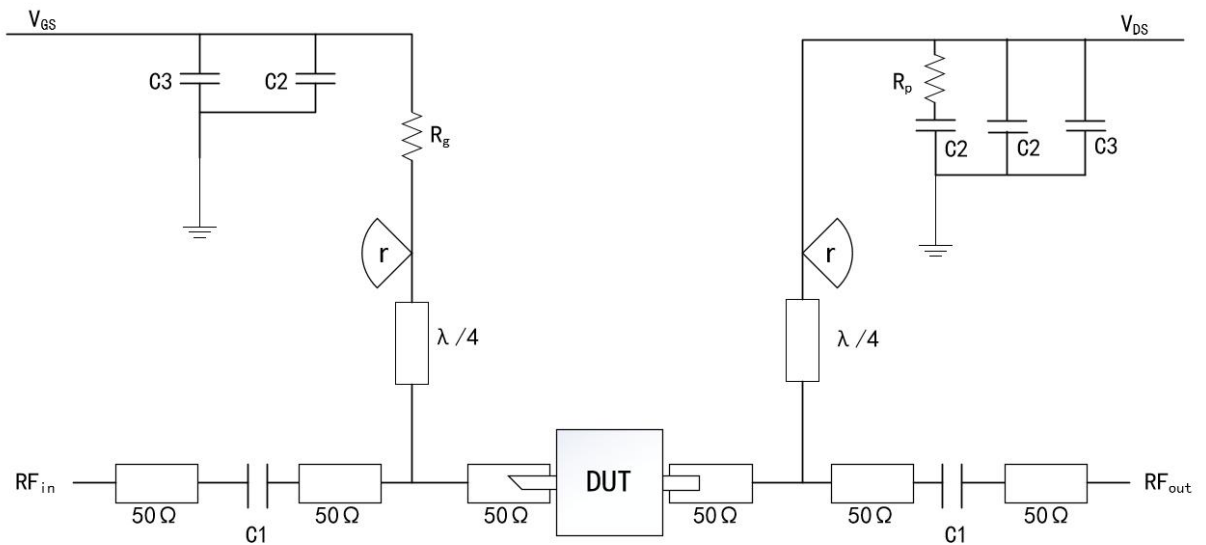
	Symbol	Test condition	Value			Unit
			Min	Typ	Max	
Drain Current	I <sub>dsr</sub>	V <sub>ds</sub> =10V CW. P <sub>in</sub> : 31dBm Freq: 4.4~5GHz	-	3.4	-	A
Saturated output power	P <sub>sat</sub>		41	-	-	dBm
Gain	G <sub>p</sub>		10	-	-	dB
Efficiency	η		-	35	-	%
Gain Flatness	ΔG		-0.8	-	+0.8	dB

## Typical Curve:





## Application Circuit:



### DUT: Device to be tested

C1:4.7pF

C2:1000pF

C3:100uF

R<sub>p</sub>:51Ω

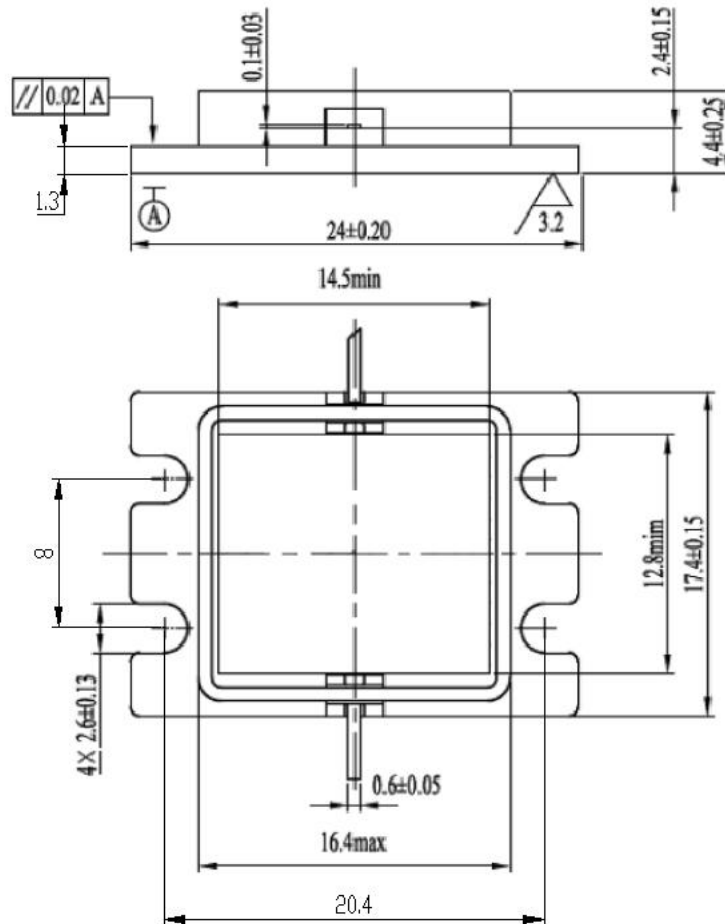
R<sub>g</sub>:15Ω

*r*(radius)≈5.8mm(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.