



ACGI090100-P44

X-band matched GaAs Device

Features:

Frequency: 9~10GHz

Saturated Output Power : $P_{Sat} \geq 44\text{dBm}$

PowerGain: $\text{Gain} \geq 8\text{dB}$

Efficiency: $\eta = 30\%$ (type)

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

Description:

ACGI090100-P44 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 9~10GHz. 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.

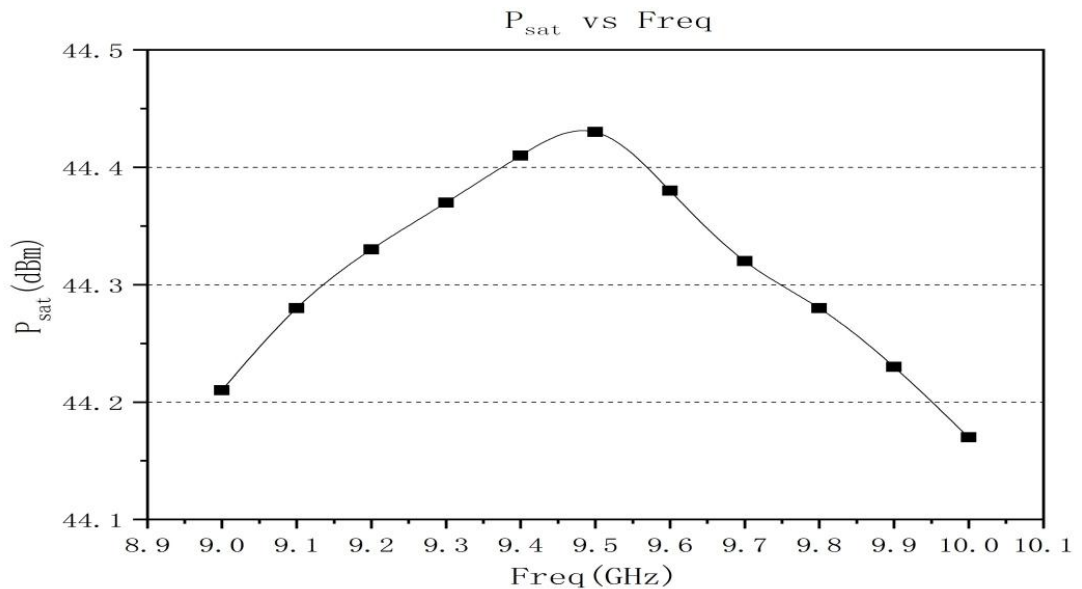
Maximun Ratings ($T_C = 25^\circ\text{C}$, Not recommended working under this condition):

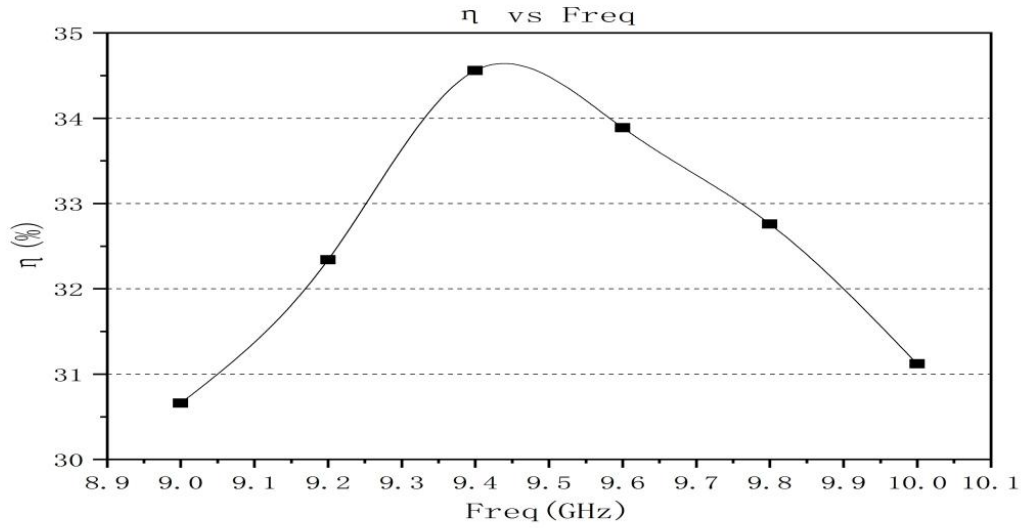
	Symbol	Value	Unit
Voltage between source and drain	V_{ds}	11	V
Voltage between gate and source	V_{gs}	-3	V
Storage Temperature Range	T_{stg}	-65 to +150	$^\circ\text{C}$
Drain and Source Channel Temperature	T_{ch}	150	$^\circ\text{C}$

Electrical Characteristics:

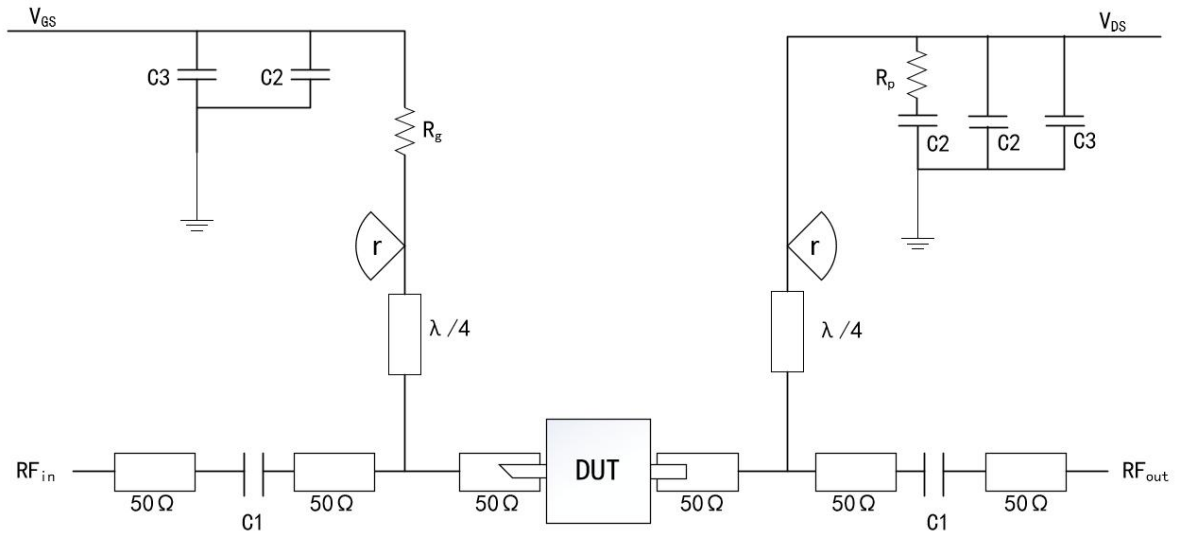
	Symbol	Test condition	Value			Unit
			Min	Typ	Max	
Drain Current	I _{dsr}	V _{ds} =10V CW. Pin: 36dBm Freq: 9~10GHz	-	8.6	-	A
Saturated output power	P _{sat}		44	-	-	dBm
Gain	G _p		8	-	-	dB
Efficiency	η		-	30	-	%
Gain Flatness	ΔG		-0.8	-	+0.8	dB

Typical Curve:





Application Circuit:



DUT: Device to be tested

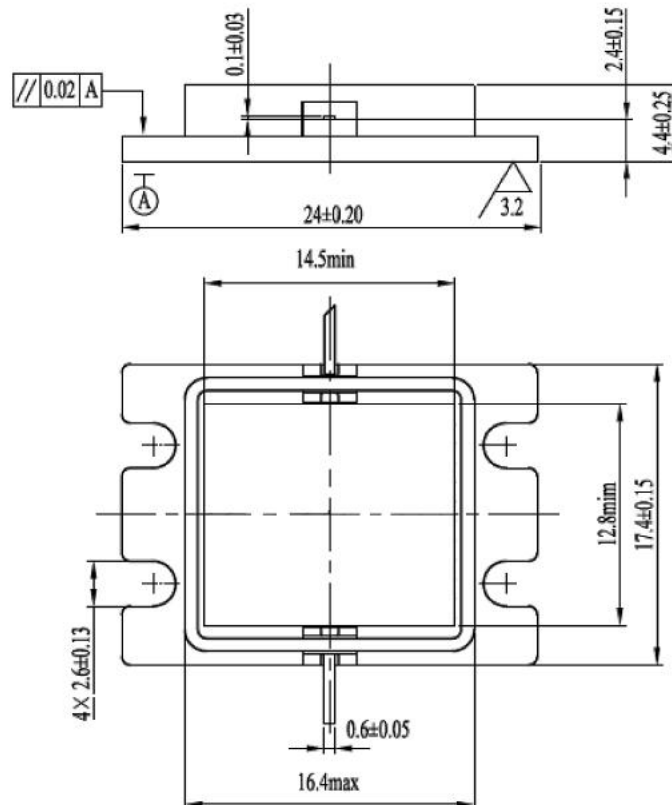
C1:1pF
C2:1000pF
C3:100uF

R_p :51Ω
 R_g :15Ω
 r (radius) \approx 3.5mm(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.