

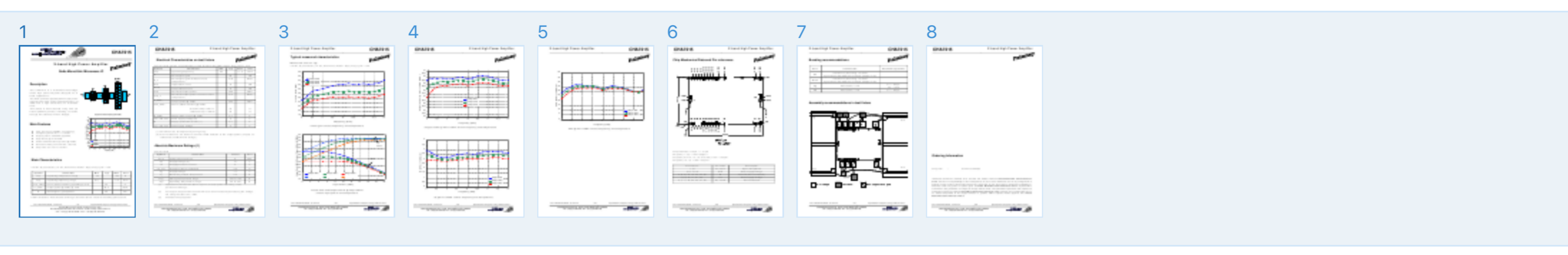
# cha7215 United Monolithic Semiconductors, cha7215 Datasheet

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cha7215	
Manufacturer Part Number	cha7215
Description	X-band High Power Amplifier
Manufacturer	United Monolithic Semiconductors
Datasheet	1. CHA7215.pdf (8 pages)

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## CHA7215

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### X-band High Power Amplifier

GaAs Monolithic Microwave IC

*Preliminary*

#### Description

The CHA7215 is a monolithic three-stage GaAs high power amplifier designed for X-band applications. The HPA provides typically 9W output power associated to 36% power added efficiency at 4dBc and a high robustness on mismatch load. This device is manufactured using 0.25 μm Power pHEMT process, including, via holes through the substrate and air bridges.

#### Main Features

- 0.25 μm Power pHEMT Technology
- Frequency band: 8.5 – 11.5GHz
- Output power: 39.5dBm @ 4dBc
- High linear gain: 28.5dB
- Power added efficiency: 36% @4dBc
- Quiescent bias point: Vd=8V, Id=2.3A
- Chip size : 5 x 3.31 x 0.07mm

#### Main Characteristics

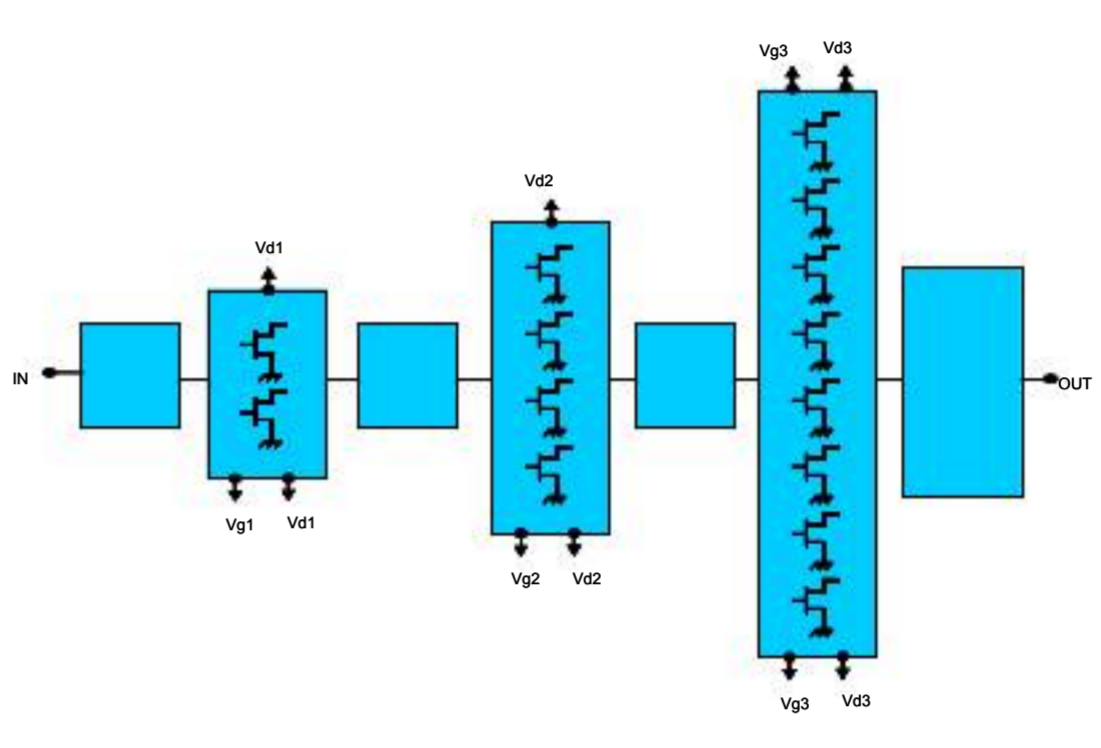
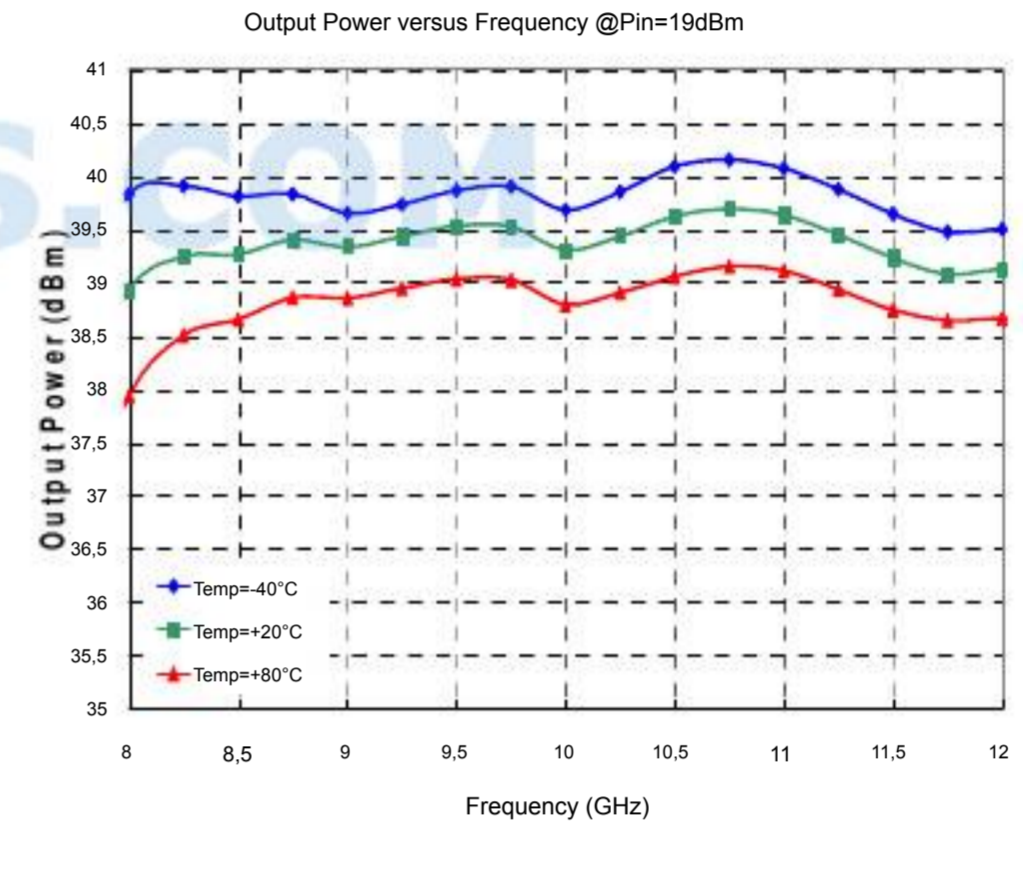
Vd=8V, Id (Quiescent) = 2.3A, Drain Pulse width = 25μs, Duty cycle = 10%

Symbol	Parameter	Min	Typ	Max	Unit
Top	Operating temperature range	-40		+80	°C
Fop	Operating frequency range	8.5		11.5	GHz
PAE_4dBc	Power added efficiency @4dBc @ 20° C		36		%
P_4dBc	Output power @ 4dBc @ 20° C		39.5		dBm
G	Small signal gain @ 20° C		28		dB

ESD Protections: Electrostatic discharge sensitive device. Observe handling precautions!

Ref : DSCHA72159040 - 09 Fev 09 1/8 Specifications subject to change without notice

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1 2 3 4 5 6 7 8

## Related parts for cha7215

Image	Part Number	Description	Manufacturer	Datasheet	Request
	cha4105-99f	2-4ghz Driver Gaas Monolithic Microwave Ic	United Monolithic Semiconductors	(12 pages)	
	cha4105-qdg	2-4ghz Driver Gaas Monolithic Microwave Ic In Smd Leadless Package	United Monolithic Semiconductors	(12 pages)	
	dschc3014	Gaas Monolithic Microwave Ic	United Monolithic Semiconductors	(16 pages)	
	CHA3511	6-18ghz Amplifier	United Monolithic Semiconductors	(10 pages)	
	CHA3512	6-18ghz Low Noise Digital Variable Amplifier	United Monolithic Semiconductors	(10 pages)	
	CHA3513	6-18ghz 3 Bit Digital Variable Amplifier	United Monolithic Semiconductors	(10 pages)	
	CHA3514	6-18ghz 4 Bit Digital Variable Amplifier	United Monolithic Semiconductors	(10 pages)	
	CHA6518	5 ? 18 Ghz High Power Amplifier	United Monolithic Semiconductors	(8 pages)	
	CHA1077A	W-band Low Noise Amplifier	United Monolithic Semiconductors	(8 pages)	
	CHA2066	10-16GHz Low Noise Amplifier	United Monolithic Semiconductors	(8 pages)	
	CHA3091A	DC-40GHZ ATTENUATOR	United Monolithic Semiconductors		
	CHA6517	6 - 18 GHz High Power Amplifier	United Monolithic Semiconductors	(10 pages)	
	CHA7012	X-band HBT High Power Amplifier	United Monolithic Semiconductors	(10 pages)	
	cha2093	20-30ghz Low Noise Amplifier	United Monolithic Semiconductors	(8 pages)	
	cha2093bf	20-30ghz Noise Amplifier	United Monolithic Semiconductors	(8 pages)	

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<p><b>Page 2</b></p> <p>... For higher compression the level limit can be increased by decreasing the voltage Vd using the rate 0 dBc (3) Without RF input power Ref : DSCHA72159040 - 09 Fev 09 Route Départementale 128 , B.P.46 - 91401 ORSAY Cedex - FRANCE Tel.: +33 (0) Fax : +33 (0) X-band High Power Amplifier Parameter 8.5GHz&lt;Freq&lt;10GHz&lt; ...</p>
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