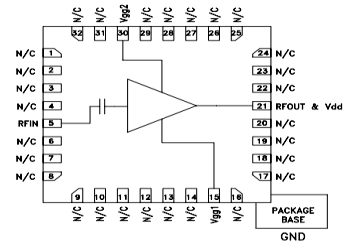


Functional Diagram



Performance characteristics:

- Frequency band: 2GHz~20GHz
- Gain: 16dB
- Input and output standing wave: 1.5
- Output P-1dB:26dBm
- Power supply bias: +8V/-0.8V
- Package size: 5mmx5mm

Product Description:

CW464SP5 is a GaAs MMIC broadband power amplifier chip with operating frequency covering 2GHz~20GHz, gaintypical value 16dB, 1dB compression power 26dBm, excellent port standing wave characteristics in the whole operating frequency range, ideal for application in microwave hybrid ICs and multi-chip modules as well as low- power systems.

Electrical parameters:($T_A=25^{\circ}C$, +8V/-0.8V)

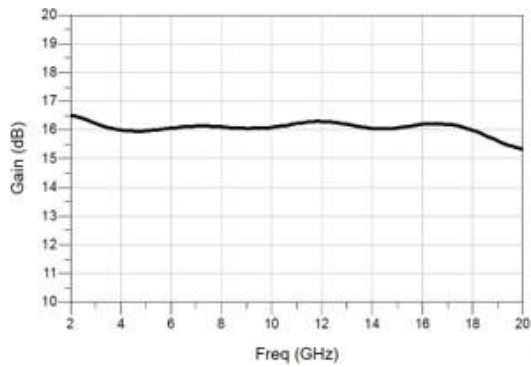
Indicators	Minimum value	Typical values	Maximum value	Unit
Frequency range	2~20			GHz
Gain	15.5	16	16.5	dB
P-1dB	-	26	-	dBm
Input standing wave	-	1.5	-	
Output standing wave	-	1.5	-	
Static current	-	-	350	mA

Usage limitation parameters: (Exceeding any of the above maximum limits may result in permanent damage.)

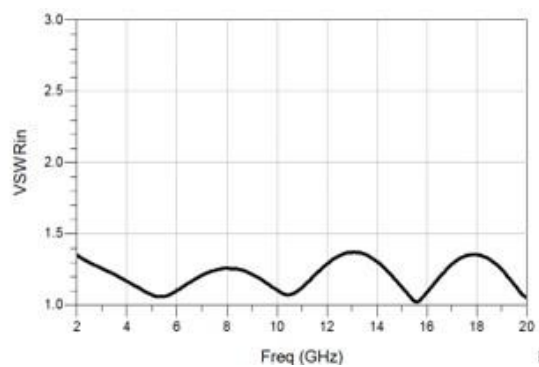
Maximum power	25dBm
Storage temperature	-65°C~+150°C
Operating temperature	-55°C~+85°C

Typical curves:

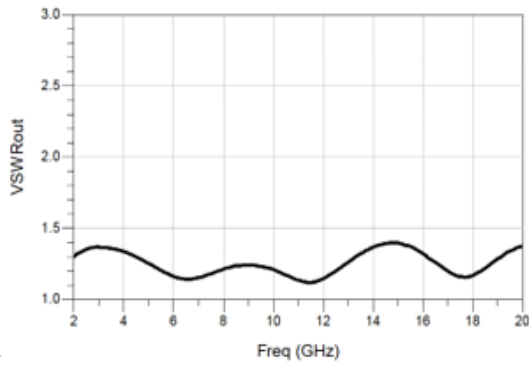
Gain



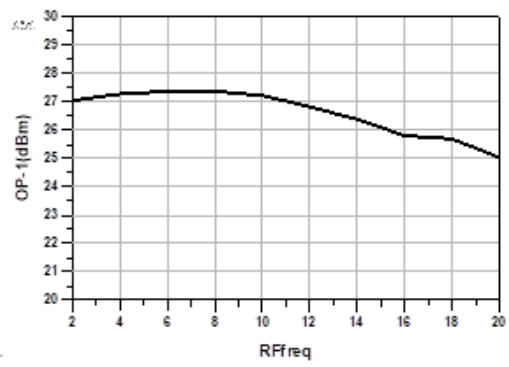
Input standing wave



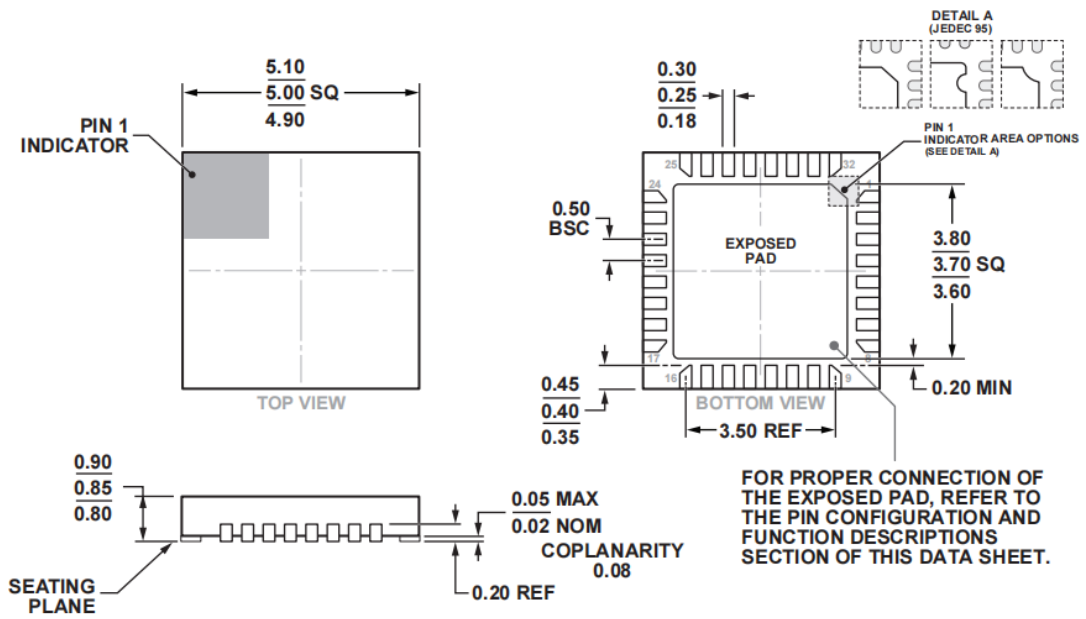
Output standing wave




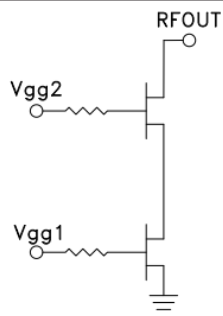

Output P-1dB



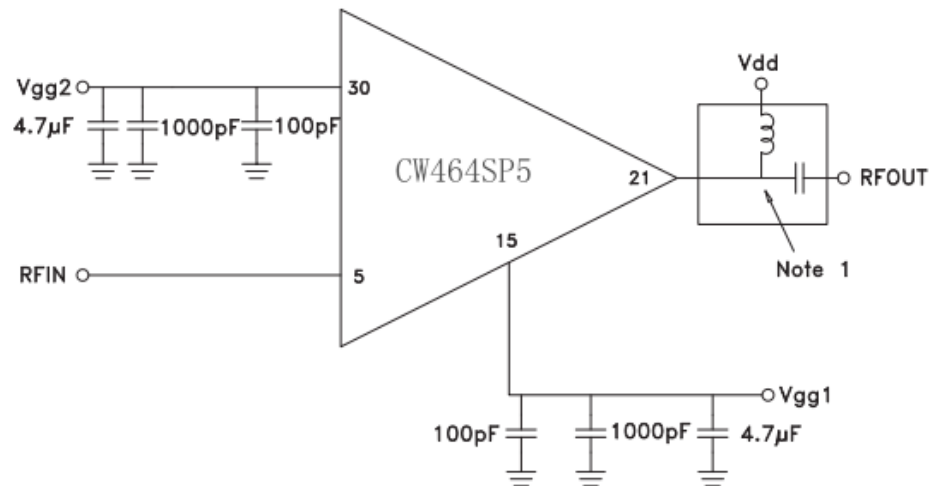
Physical size drawing: (unit mm)



Pin Descriptions

Pin Number	Function	Description	Interface Schematic
5	RFIN	This pin is AC coupled and matched to 50 Ohms.	RFIN 
15	Vgg1	Gate Control for amplifier. Adjust between -2 to 0V to achieve Idd= 290 mA.	
21	RFOUT & Vdd	RF output for amplifier. Connect the DC bias (Vdd) network to provide drain current (Idd). See application circuit herein.	
30	Vgg2	Control voltage for amplifier. +3V should be applied to Vgg2 for nominal operation.	
Ground Paddle	GND	Ground paddle must be connected to RF/DC ground.	
1 - 4, 6 - 14, 16 - 20, 22 - 29, 31, 32	N/C	No connection. These pins may be connected to RF ground. Performance will not be affected.	

Application Circuit



NOTE 1: Drain Bias (Vdd) must be applied through a broadband bias tee or external bias network.