

## Performance characteristics

- Frequency range: 42GHz~46GHz
- Gain: 17dB
- Psat: 43dBm
- PAE: 25%
- +24V @3.0A (quiescent)

## Product Introduction

The GaN millimeter wave power amplifier chip covers a frequency range of 42-46GHz, with a power gain of 17dB, a saturated output power of 43dBm, and a power added efficiency of 25%. The chip size is 4.02×5.57×0.1mm.

## Electrical specifications (TA=+25 °C)

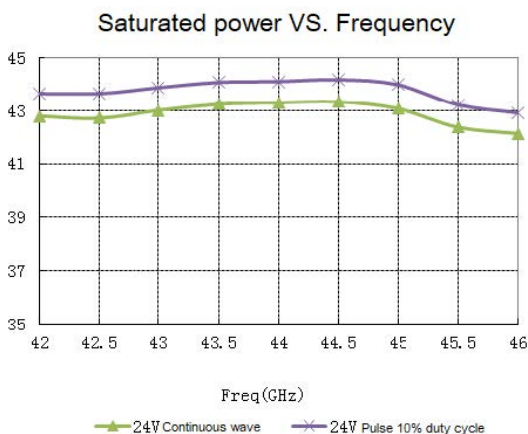
Parameter	Min	Typ	Max	Unit
Frequency range	42-46			GHz
Psat		43		dBm
Power gain		17		dB
PAE		25		%
Operating current	4.0			A

Note: 1) All chips have undergone 100% DC testing on the chip.  
2) Test conditions: VD=24V (duty cycle 10%, pulse width 100μs, and continuous wave), VG=-1.2V, Pin=26dBm

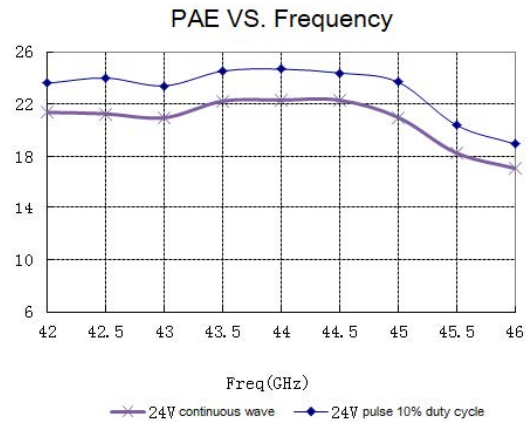
## Absolute maximum ratings

Symbol	Parameter	Ratings
V <sub>DS</sub>	Positive drain bias voltage	+26V
V <sub>GS</sub>	Negative gate bias voltage	-6V
P <sub>in</sub>	Input continuous wave power	+32dBm
T <sub>ch</sub>	Channel temperature	+175°C
T <sub>STG</sub>	Storage temperature	-65°C~+150°C

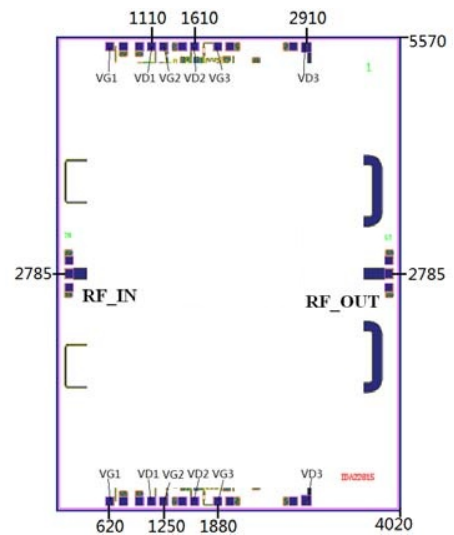
**Test data** (24V (duty cycle 10%, pulse width 100μs, and continuous wave), VG=-1.2V, Pin=26dBm)



## GaN MMIC Power Amplifier Chip, 42-46 GHz

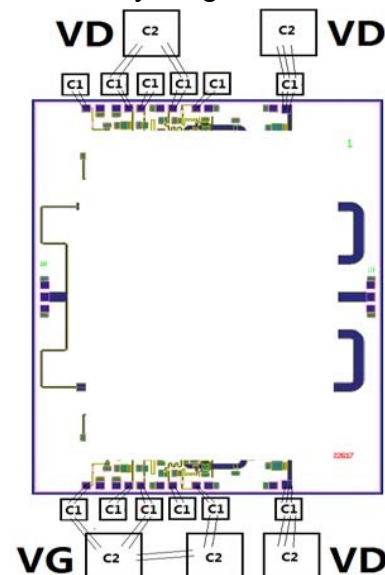


## Outline dimensions



Note: The dimensions indicated in the figure are in micrometers (μm); Input/output pressure point size 100×120μm<sup>2</sup>; The size of the bias pressure point is 100×100μm<sup>2</sup>.

## Suggested assembly diagram



Note: Peripheral capacitors C1: 100pF, C2: 1000pF.