



# RFS1006

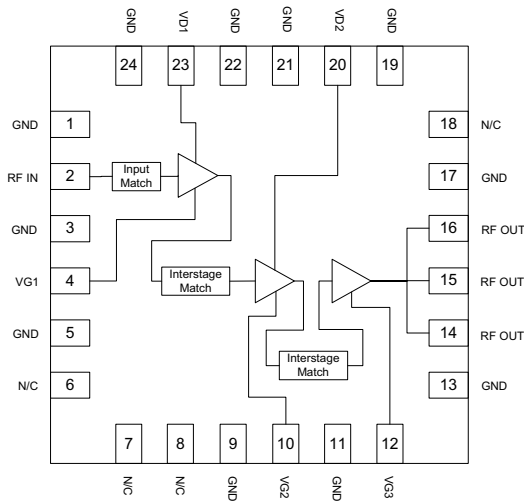
## 3.4-3.6 GHz Power Amplifier

### Applications

- 3.4-3.6 GHz fixed-wireless transmitter
- Wireless Local Loop transmitter

### Product Description

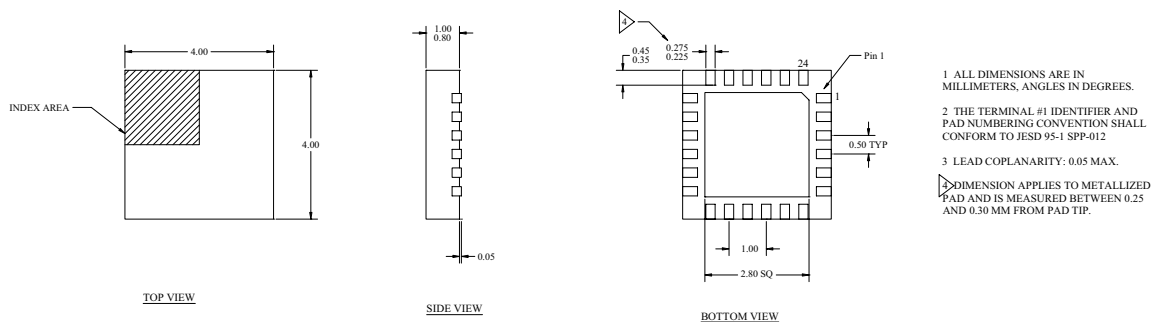
The RFS1006 power amplifier is a high-power, high-performance GaAs MESFET IC designed for use in transmit applications in the 3.4-3.6 GHz frequency band. With a P1dB of 31 dBm, the device is ideal as a final stage for fixed wireless applications requiring high transmit linearity. The input and output of the PA can be easily matched for optimum linearity and power performance from 3.4 to 3.6 GHz.



### Product Features

- 31 dBm P1dB
- 21 dB gain

### Functional Block Diagram



### 4x4 mm Package Outline

## RFS1006

## 3.4-3.6 GHz Power Amplifier

Parameter <sup>1</sup>	Specification			Unit	Condition
	Min.	Typ.	Max.		
Overall					
Frequency Range	3400		3600	MHz	
Output P1dB		31		dBm	P <sub>IN</sub> = +11dBm
Efficiency at P1dB		35		%	
Small Signal Gain		21		dB	P <sub>IN</sub> = -20dBm
Gain Flatness		±1.0		dB	Entire Band
Harmonics					
2 <sup>nd</sup> Harmonic		-50		dBc	
3 <sup>rd</sup> Harmonic		-30		dBc	
Spurious (Stability) <sup>2</sup>		-60		dBc/30 kHz	P <sub>IN</sub> = -30 to +13 dBm
Reverse Isolation		50		dB	
Noise Figure		5.5		dB	
Input Return Loss	10			dB	
Power Supply					
Drain Operating Voltage	5		7	V	
Gate Operating Voltage		-1.1		V	
Current Consumption		570		mA	
Gate Leakage Current		150		μA	

Note 1: Test Conditions: V<sub>DD</sub>=7.0V, P<sub>IN</sub>=+11dBm, Freq. = 3500MHz, V<sub>GG</sub> = -1.1 V, T = 25 °C, unless otherwise specified.

Note 2: Load VSWR is set to 7:1 and the angle is varied 360 degrees.

## Absolute Maximum Ratings

Parameter	Rating	Unit
DC Power Supply	8.0	V
DC Gate Voltage	-5.0 min, -0.5 max	V
DC Supply Current	1000	mA
Maximum RF input level	+14	dBm
Operating Ambient Temperature	-40 to +85	°C
Storage Temperature	-55 to +150	°C



## Ordering Information

Part Number	Temp. Range (°C)	Package Description	Quantity
PRFS-1006-0EVL	-40 to +85	Evaluation Board	1
PRFS-1006-0005	-40 to +85	13" Reverse Tape/Reel	2500 pcs.
PRFS-1006-0006	-40 to +85	13" Tape/Reel	2500 pcs.
PRFS-1006-0007	-40 to +85	7" Reverse Tape/Reel	1000 pcs.
PRFS-1006-0008	-40 to +85	7" Tape/Reel	1000 pcs.
PRFS-1006-0009	-40 to +85	Bulk – 4x4 mm 24-pin LPCC	1-999 pcs.

**NOTES**

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