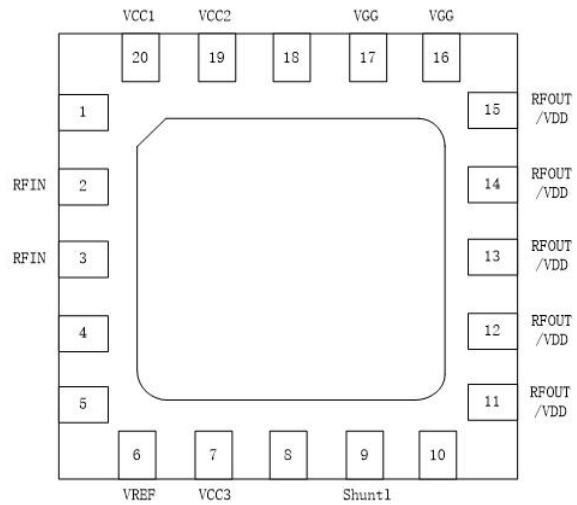


Typical Performance

- Frequency: 5.0~6.1GHz
- Voltage: 5V & 28V
- Gp@Psat: 34dB
- Psat: 5W
- Package: QFN 4×4-20L



Applications

- WiFi 6/6E
- Wireless Data Transmission

Product Description

Innotion's YPH50603437 is a 5W RF power amplifier chip with an internal integrated ESD protection unit for high reliability. The internal hybrid integration scheme requires a negative voltage, and it operates over the frequency range of 5.0~6.1GHz with an output power of 5W (VCC=5V, VDD=28V). The chip is packaged in a standard surface-mount QFN4x4-20L package for easy system integration.

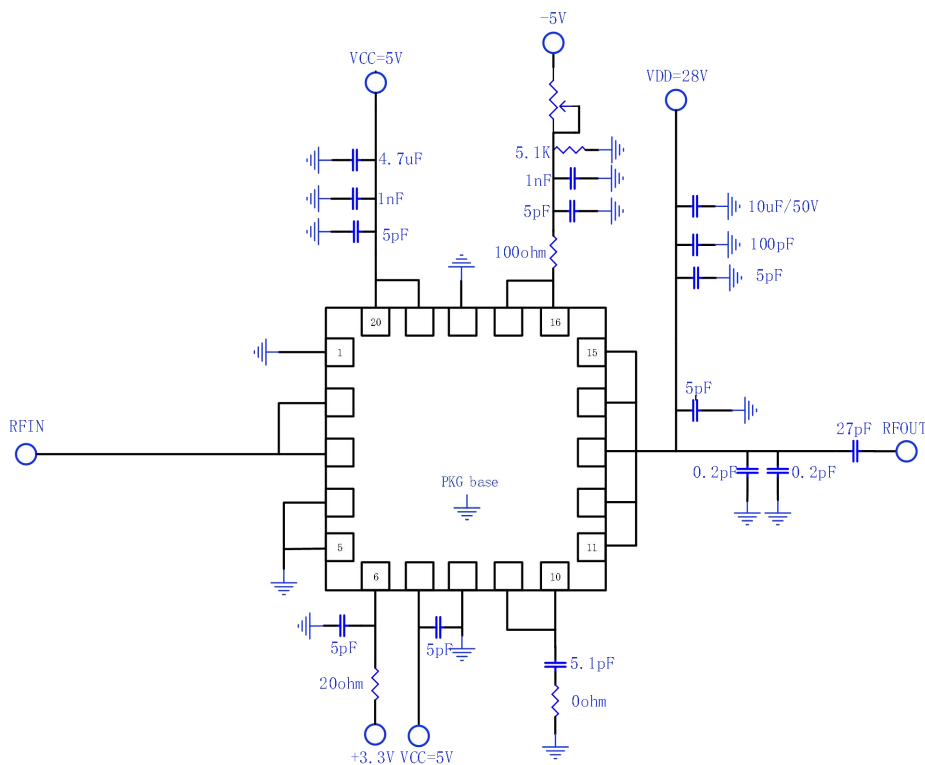
Pin Definition

Pin No.	Symbol	Description
1,4,5,8,10,18	N/C	Not connected
2,3	RFIN	RF signal input
6	VREF	Reference Voltage of Driver
7,19,20	VCC3/VCC2/VCC1	Collector Voltage of Driver
9	Shunt L	For matching
16,17	VGG	Gate Voltage of Last Stage PA
11-15	RFOUT/VDD	RF output & Drain Voltage of Last Stage PA
PKG base	GND	Ground

Electrical Characteristics

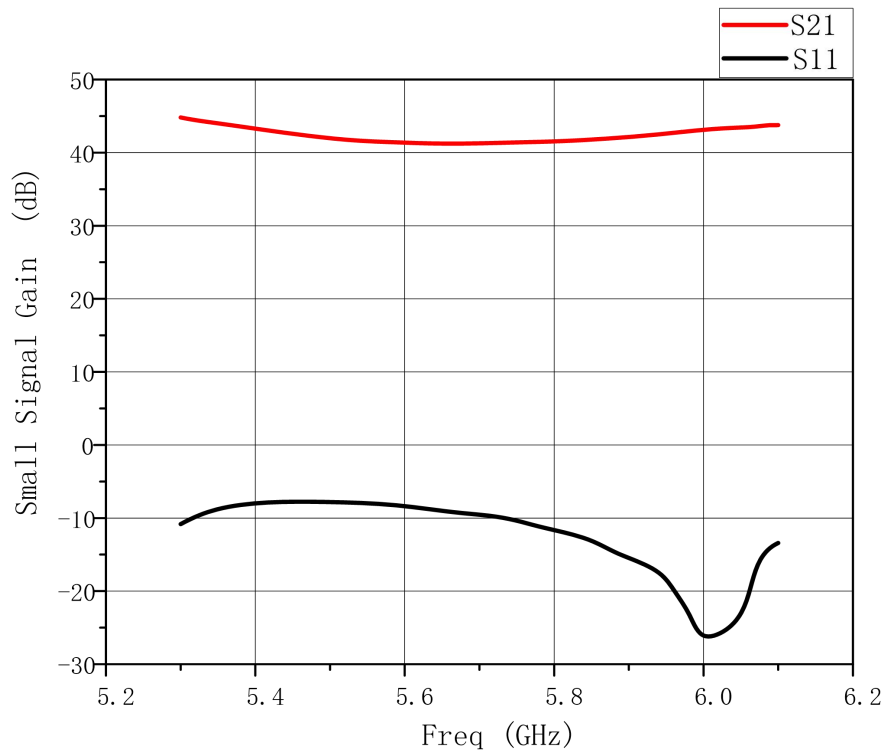
Parameter	Condition	Specification			Unit
		Min.	Typ.	Max.	
Frequency		5.0	5.7	6.1	GHz
Test Frequency		5.3	5.7	6.1	GHz
Gain@Small Signal		42.3	41.2	42.9	dB
Output@Psat		38.1	38.3	38.1	dBm
S11		-10.8	-9.6	-13.4	dB
Eff@Psat		50	48	47	%
ICQ of Driver	VCC1=VCC2=VCC3=5V VREF=3.23V		250		mA
IDQ of Last Stage PA	VDD=28V VGG=-2.28V		220		mA
Current of Driver	VCC1=VCC2=VCC3=5V VREF=3.23V	860	960	990	mA
Current of Last Stage PA	VDD=28V VGG=-2.28V	450	480	490	mA

Schematic of Matching Network

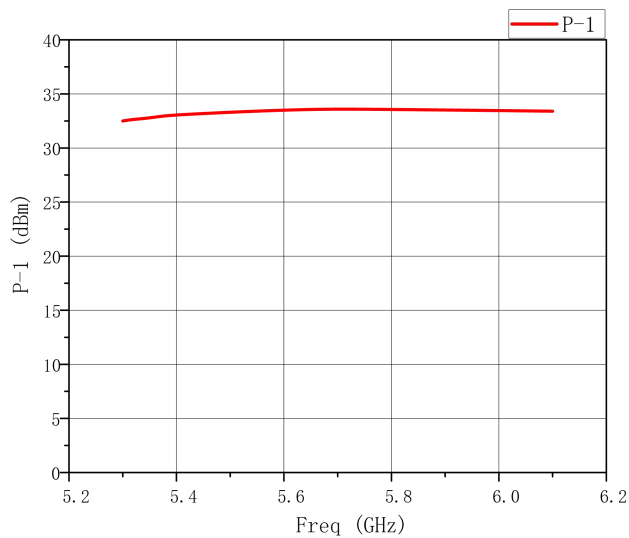


Small Signal S21 & S11

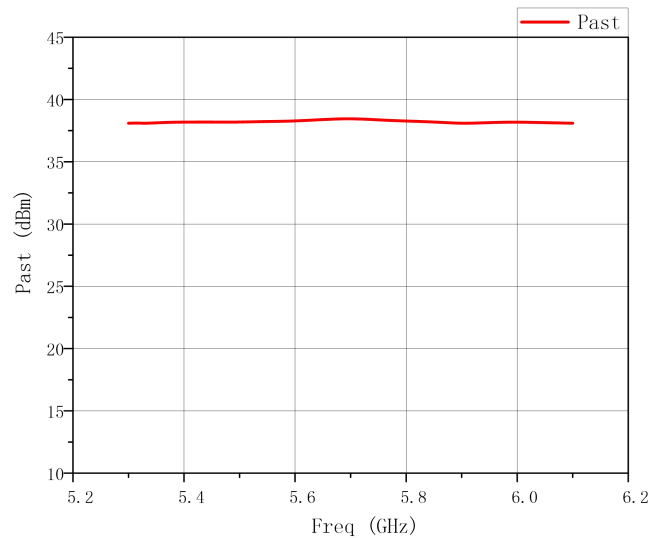
Test Results



P-1 v.s Freq

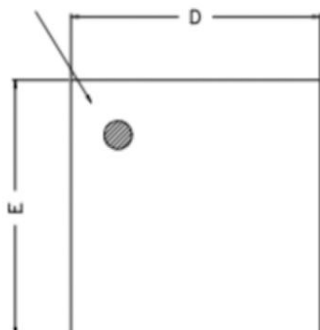


Psat v.s Freq



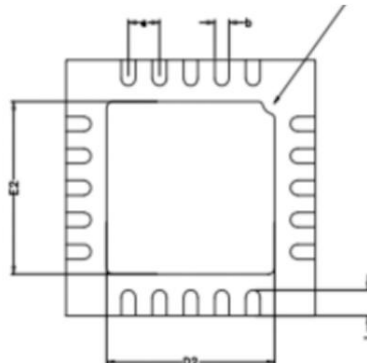
Package Outline

PIN 1 DOT
BY MARKING



TOP VIEW

PIN #1 IDENTIFICATION
CHAMFER R0.2



BOTTOM VIEW



SIDE VIEW

COMMON DIMENSIONS(MM)			
PKG.	W:VERY VERY THIN		
REF.	MIN.	NOM.	MAX
A	0.70	0.75	0.80
A1	0.00	-	0.05
A3	0.2 REF.		
D	3.95	4.00	4.05
E	3.95	4.00	4.05
b	0.18	0.23	0.30
L	0.30	0.40	0.50
D2	2.55	2.70	2.80
E2	2.55	2.70	2.80
e	0.5 BSC		