

勝特力電材超市-龍山店 886-3-5773766
勝特力電材超市-光復店 886-3-5729570
勝特力電子(上海) 86-21-34970699
勝特力電子(深圳) 86-755-83298787
<http://www.100y.com.tw>



名称: SPF-5189 50MHz-4000MHz

低噪声射频放大器模块

尺寸: 50MM X 30MM

供电电压范围: +5V

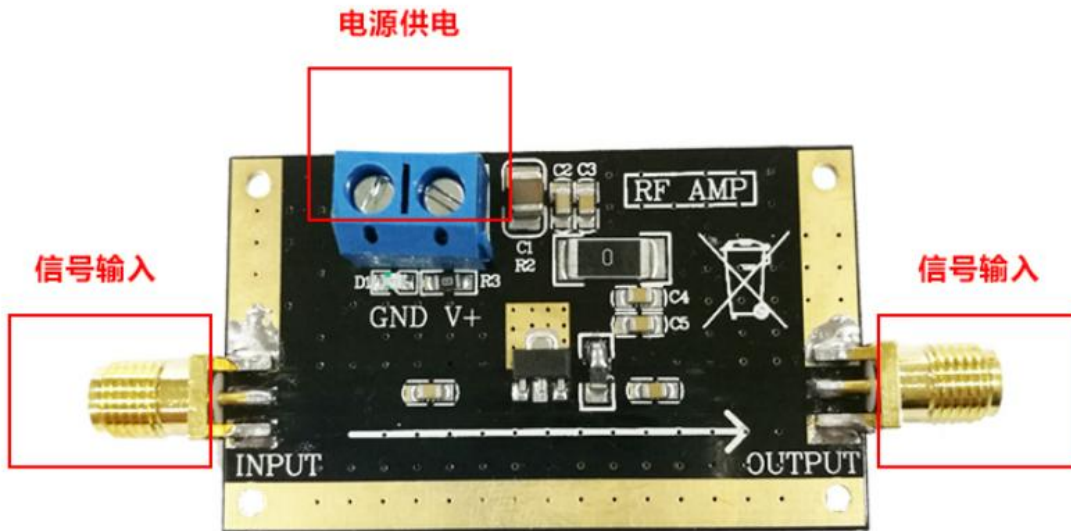
固定增益: 18dB at 900MHz
50MHz-4000MHz
+22.7dBm P1dB at 1960MHz
+39.5dBm OIP3 at 1960MHz

噪声系数: 0.6dB at 900MHz

3V- 5V单电源供电, 电流可调 (通过偏置电阻)
典型电流60mA阻抗匹配50Ω

特别注意!

本店出售的所有射频放大器必须要先接负载在接入信号 (上电) 否则很容易烧掉!!





Package: SOT-89

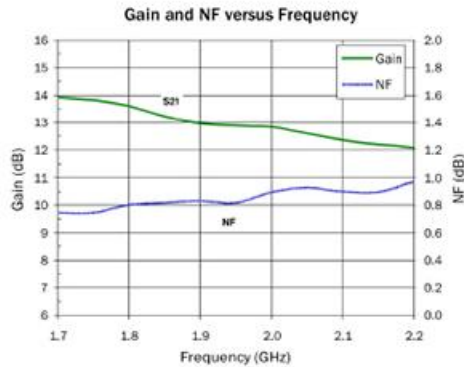


Product Description

The SPF-5189Z is a high performance pHEMT MMIC LNA designed for operation from 50MHz to 4000MHz. The on-chip active bias network provides stable current over temperature and process threshold voltage variations. The SPF-5189Z offers ultra-low noise figure and high linearity performance in a gain block configuration. Its single-supply operation and integrated matching networks make implementation remarkably simple. A high maximum input power specification make it ideal for high dynamic range receivers.

Optimum Technology Matching® Applied

- GaAs HBT
- GaAs MESFET
- InGaP HBT
- SiGe BiCMOS
- Si BiCMOS
- SiGe HBT
- GaAs pHEMT
- Si CMOS
- Si BJT
- GaN HEMT
- InP HBT
- RF MEMS
- LDMOS



Features

- Ultra-Low Noise Figure=0.60dB at 900MHz
- Gain=18.7dB at 900MHz
- High Linearity: OIP₃=39.5dBm at 1960MHz
- P_{1dB}=22.7dBm at 1960MHz
- Single-Supply Operation: 5V at I_{DQ}=90mA
- Flexible Biasing Options: 3V to 5V, Adjustable Current
- Broadband Internal Matching

Applications

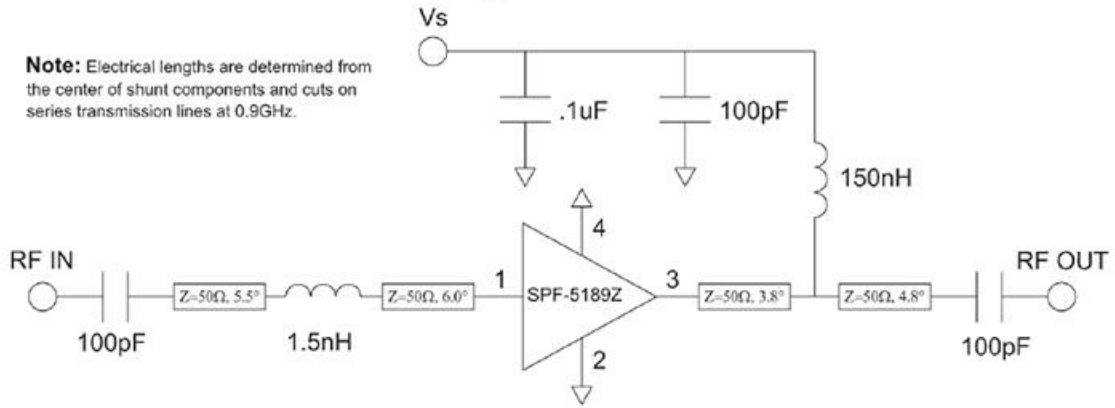
- Cellular, PCS, W-CDMA, ISM, WiMAX Receivers
- PA Driver Amplifier
- Low Noise, High Linearity Gain Block Applications

官方参数介绍

Parameter	Specification			Unit	Condition
	Min.	Typ.	Max.		
Small Signal Gain		18.7		dB	0.9GHz
	11.3	12.8	14.3	dB	1.96GHz
Output Power at 1dB Compression		22.4		dBm	0.9GHz
	20.7	22.7		dBm	1.96GHz
Output Third Order Intercept Point		38.5		dBm	0.9GHz
	36.0	39.5		dBm	1.96GHz
Noise Figure		0.55		dB	0.9GHz
		0.8	1.1	dB	1.96GHz
Input Return Loss		17.5		dB	0.9 GHz
	14.5	18.5		dB	1.96GHz
Output Return Loss		16.0		dB	0.9GHz
	11.0	15.0		dB	1.96GHz
Reverse Isolation		24.0		dB	0.9GHz
		18.0		dB	1.96GHz
Device Operating Voltage		5		V	
Device Operating Current		90		mA	Quiescent
Thermal Resistance		65		°C/W	Junction to lead

Test Conditions: V_D=5V, I_{DQ}=90mA, TL=25°C, OIP₃ Tone Spacing=1MHz, P_{OUT} per tone=0dBm
Z_S=Z_L=50Ω, 25°C, Application Circuit Data

900MHz Application Schematic



我们模块的效果测试图（仅供参考）（不同频段电容电感值不同，测试图仅为某一频段有效）



低噪声放大器 0.05 ---4GHz NF:0.6dB LNA 射频放大器测试数据

Fre (MHz)	50	100	500	800	1000	1500	2000	2400	2800	3000
Gain (dB)	21.05	21.01	20.87	19.75	16.75	13.62	10.16	10.00	9.00	7.25