



主要特点

工作频段: 0.01 – 2 GHz

增益: 23 dB

噪声系数: 1.5 dB

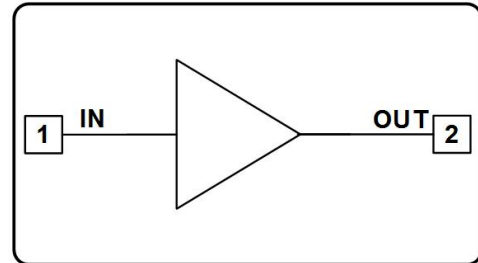
直流供电: 5 V / 95 mA

反向隔离: 30 dB

P1dB: +23 dBm

芯片尺寸: $1.0 \times 0.85 \times 0.1 \text{ mm}^3$

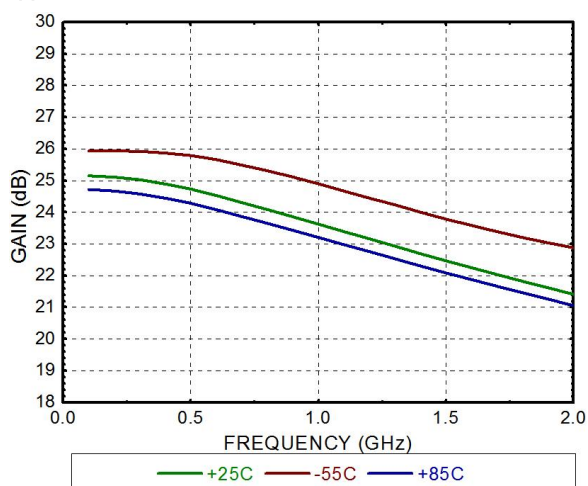
功能框图



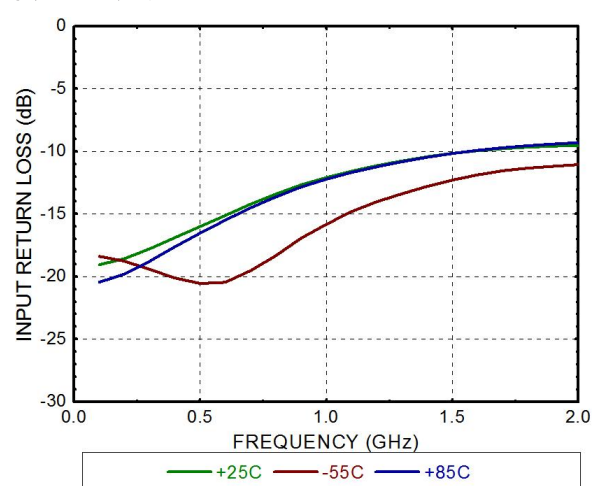
性能指标 ($T_A = +25^\circ\text{C}$, 5 V / 95 mA)

参数	最小	典型	最大	单位
工作频段	0.01 - 2			GHz
增益		23		dB
输入回波损耗		17		dB
输出回波损耗		20		dB
反向隔离度		30		dB
输出功率 1dB 压缩点		23		dBm
输出饱和功率		23.5		dBm
噪声系数		1.5		dB
OIP3@ $P_{\text{out}}=10\text{dBm}/\text{tone}$		35		dBm
OIP3@ $P_{\text{out}}=0\text{dBm}/\text{tone}$		25		dBm
工作电流	70	95	130	mA

增益

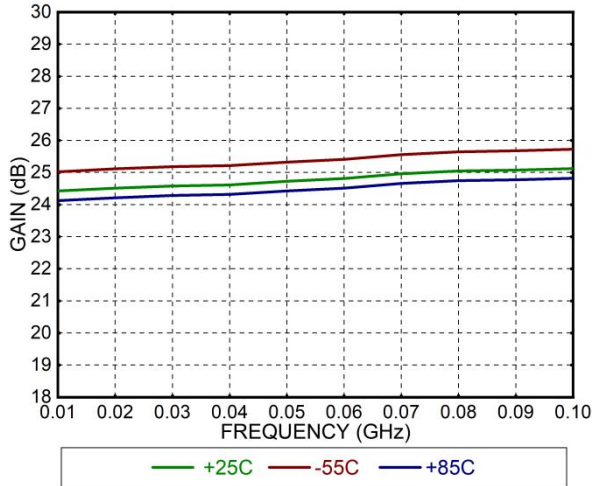


输入回波损耗

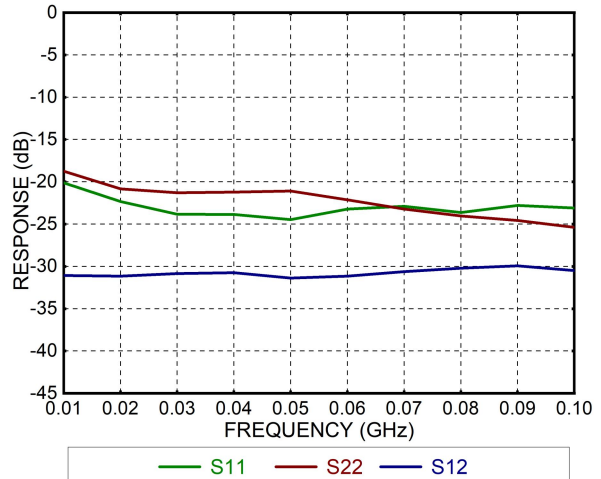




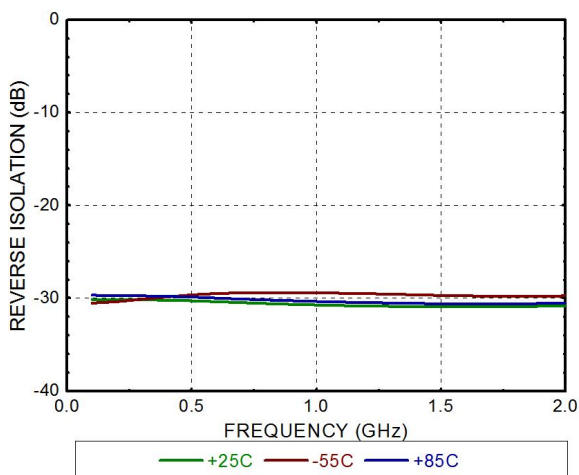
增益



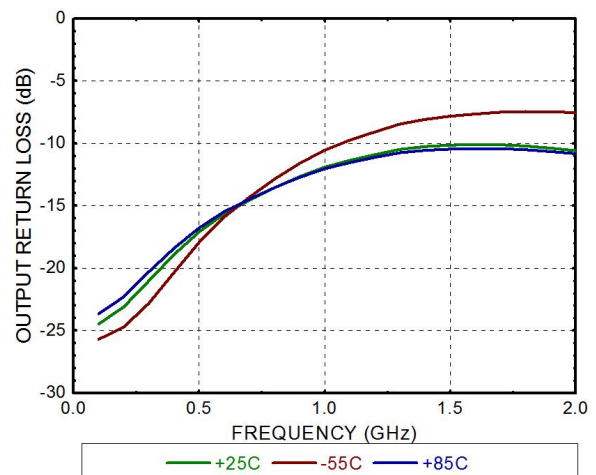
回波损耗&反向隔离度



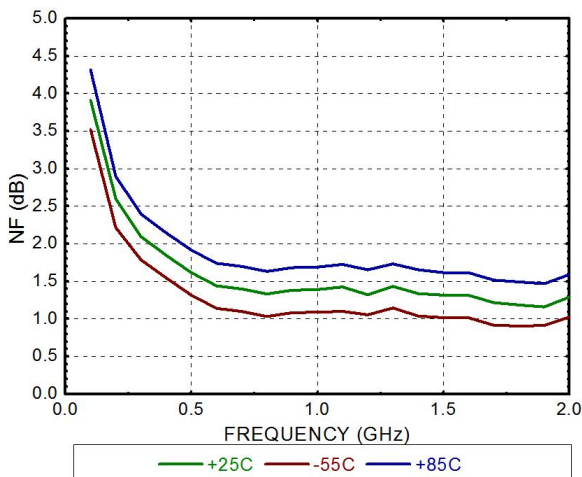
反向隔离



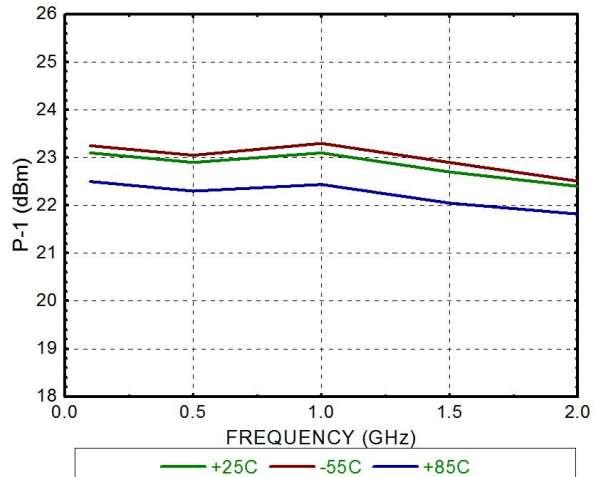
输出回波损耗



噪声



输出功率P1dB





中科海高
HiGaAs Microwave

V1.3

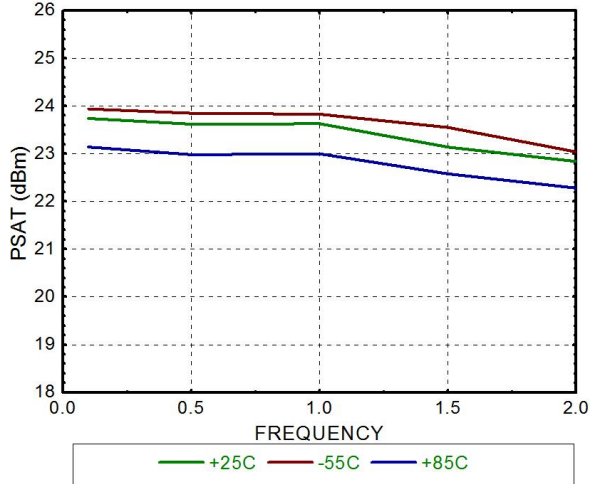
HGC180-2

GaAs pHEMT MMIC
Gain Block, 0.01 - 2 GHz

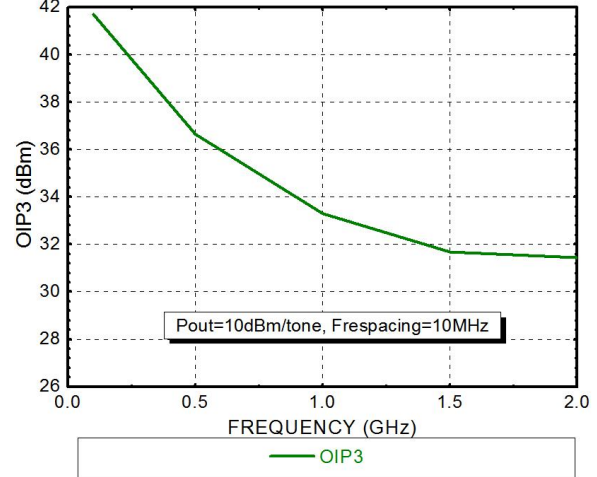
1

Gain Block - 裸芯片

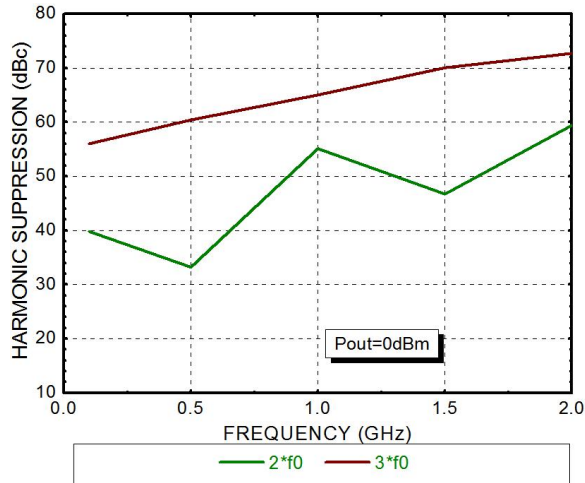
饱和输出功率



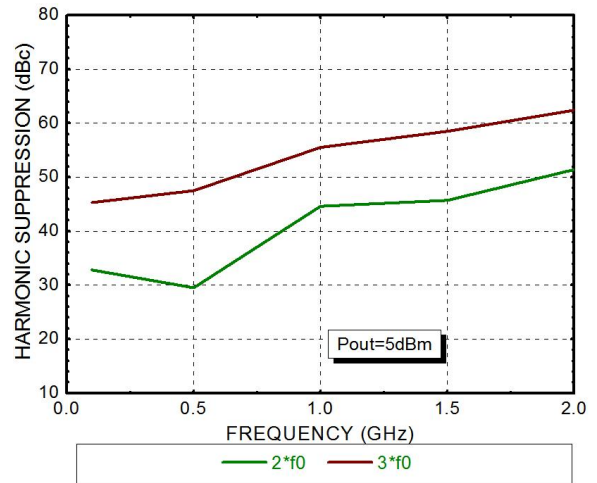
OIP3



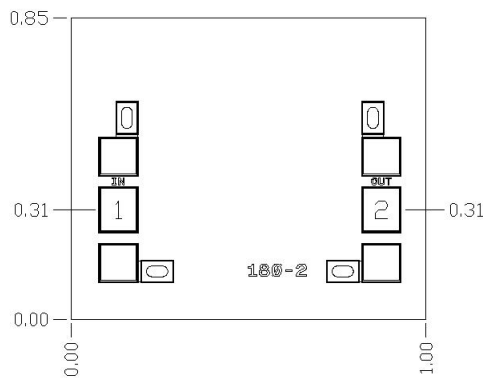
谐波抑制



谐波抑制



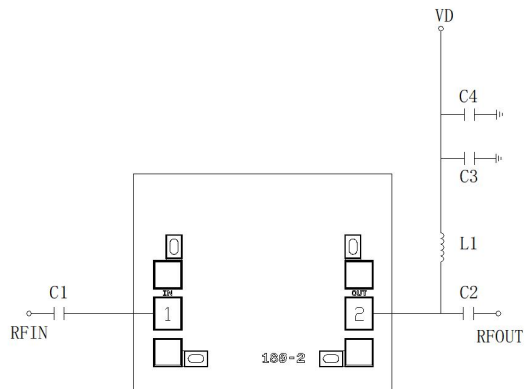
物理参数



焊盘描述

焊盘序号	功能	描述
1	IN	该焊盘是 DC 耦合，片上无隔直电容，匹配至 50 Ohm
2	OUT	该焊盘是 DC 耦合，片上无隔直电容，匹配至 50 Ohm
芯片背面	GND	芯片背面必须连接至 RF/DC 地

推荐偏置电路



	30MHz	100MHz	1GHz	2GHz
L1(nH)	820	270	47	22
C1/C2(pF)	1000	200	20	10
C3/C4(uF)	0.001/0.01			

极限参数

射频输入功率: +17 dBm

储存温度: -65 ~ +150 °C

输出端口供电: +6 V

工作温度: -55 ~ +85 °C