

关键指标

- 频率范围: 1MHz~3000MHz
- 增益: 25.5dB
- 输出 P_{1dB} : 30dBm
- 供电电压: +10~+12V
- 封装尺寸: 4mm×4mm×0.75mm

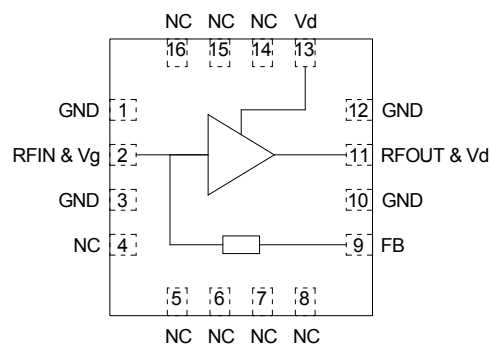
典型应用

- 点对点无线通信
- 卫星通讯
- 雷达

产品简介

HX231220P4是一款宽频段 GaAs MMIC 功率放大器，工作频率 1MHz~3000MHz，小信号增益25.5dB，输出 P_{1dB} 30dBm、PAE 40%，供电电压+10~+12V。该封装芯片背面射频直流接地，其具有简化的装配工艺，稳定的性能。

功能框图



电性能

$T_A=25^{\circ}C, V_d=+12V, I_d=0.24A, Z_0=50\Omega, CW$

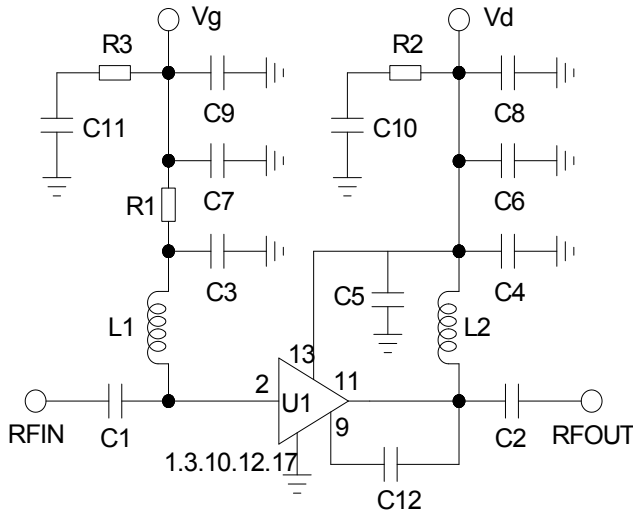
指标	最小值	典型值	最大值	单位
频率	1~3000			MHz
小信号增益	—	25.5	—	dB
小信号增益平坦度	—	± 0.5	—	dB
反向隔离度	—	-28	—	dB
输入驻波比	—	2	—	:1
输出驻波比	—	2.5	—	:1
PAE	—	40	—	%
输出 P_{1dB}	—	31	—	dBm
漏极电压 (V_D)	10	—	12	V
供电电流 (I_D)	—	240	340	mA

$V_g=-1\sim 0V$

绝对最大额定值

最大输入功率	+20dBm	工作温度	-55℃~+85℃
沟道温度	150℃	贮存温度	-65℃~+150℃
最大 V_D	+15V		

应用电路配置—1 to 1000MHz

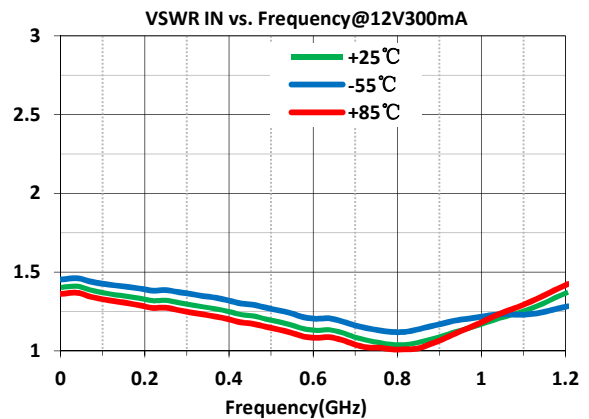
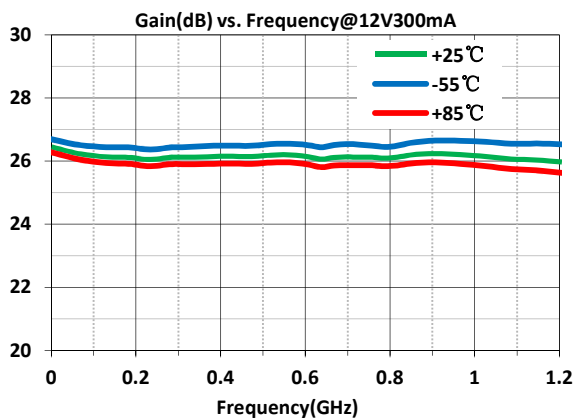


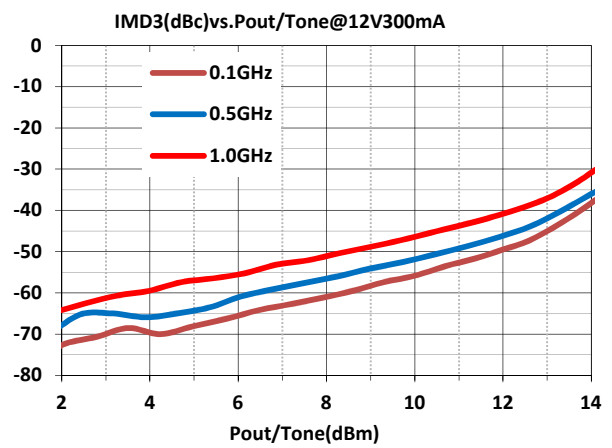
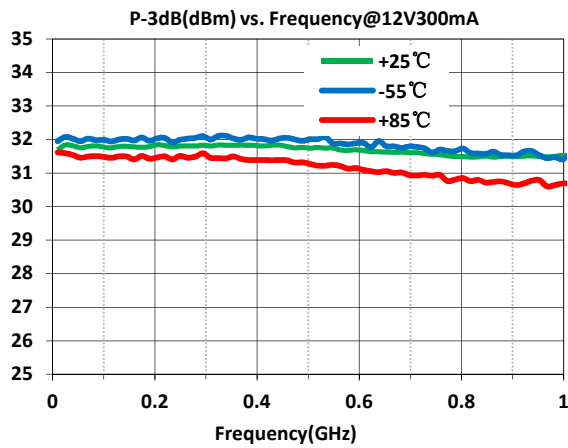
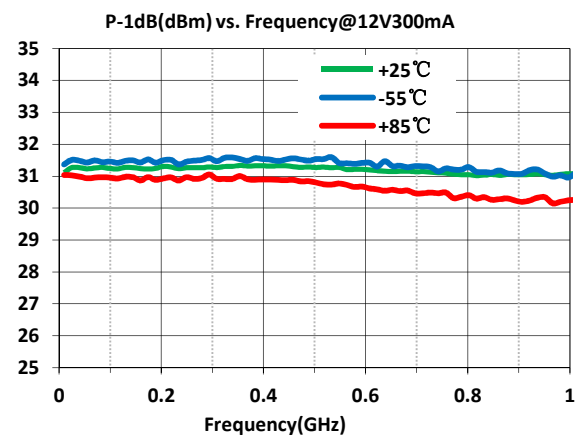
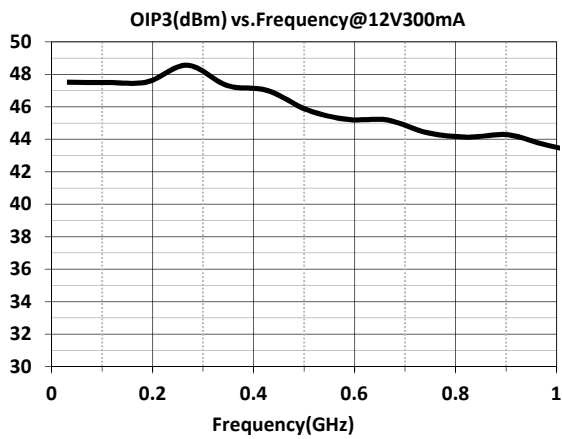
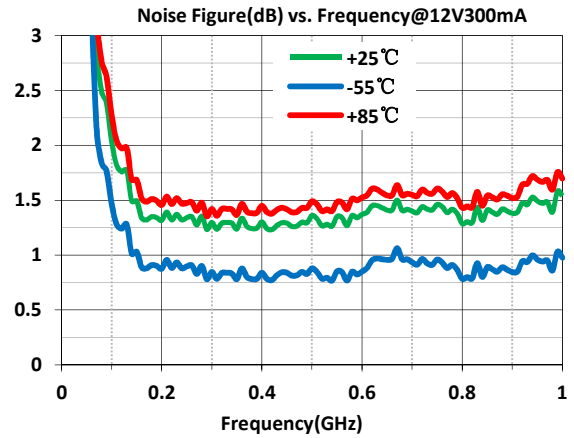
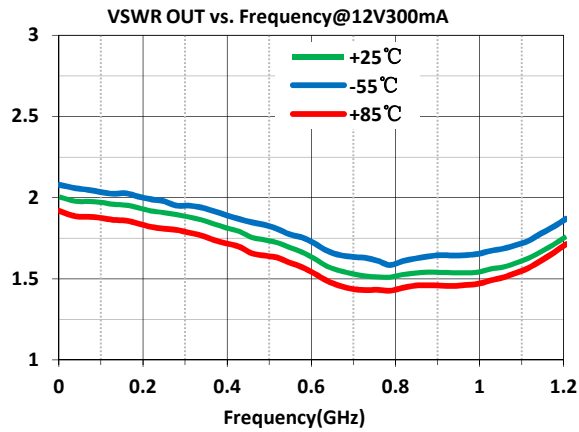
元件清单—1 to 1000MHz

参考编号	零件编号	描述	制造商
U1	HX231220P4	HX231220P4	—
C1,C2,C3,C4,C5,C10,C11	0402YC473KAT2A	0.047uF ,Cap,0402	AVX
C6,C7	08053C105K4Z2A	1uF,Cap,0805	AVX
C8,C9	1206YD226KAT2A	22uF,Cap,0805	AVX
C12	04025C472JAT2A	4700pF,Cap,0402	AVX
L1	1812LS223	Ind,22uH,1812	COILCRAFT
L2	1812LS123	Ind,12uH,1812	COILCRAFT
R1,R2,R3	CRCW080551R0FKEA	Res,0805	Vishay

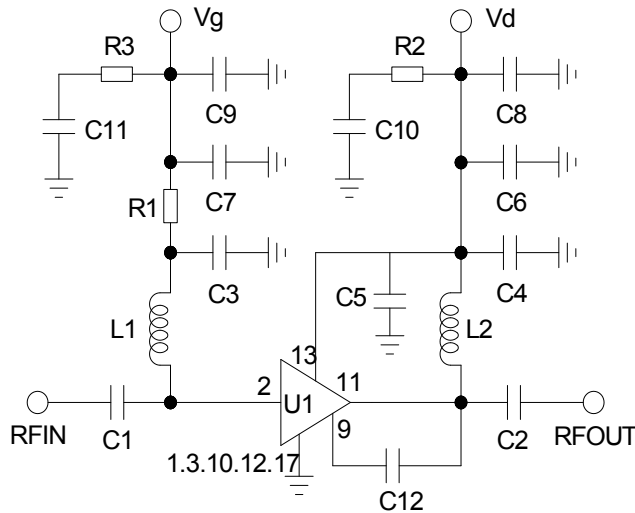
典型性能测试曲线

1 to 1000 MHz





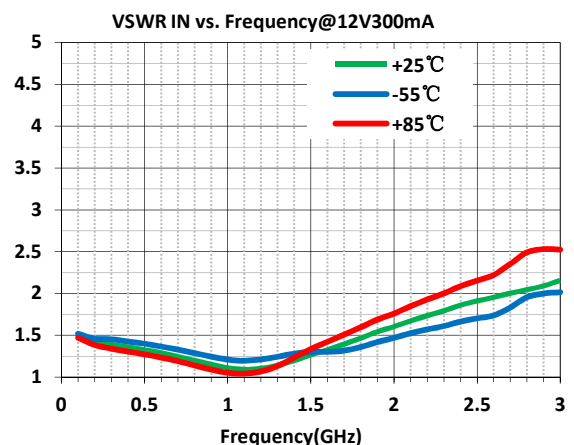
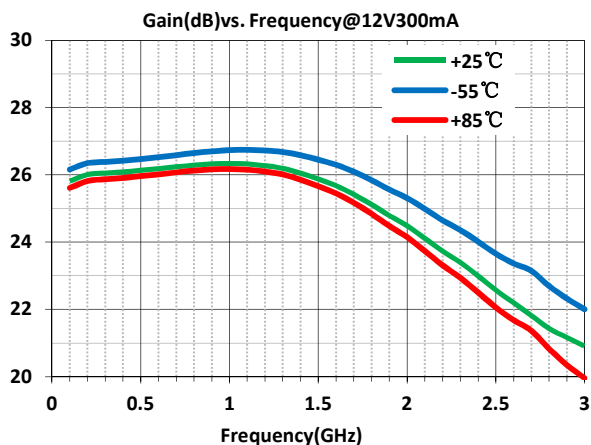
应用电路配置—100 to 3000MHz

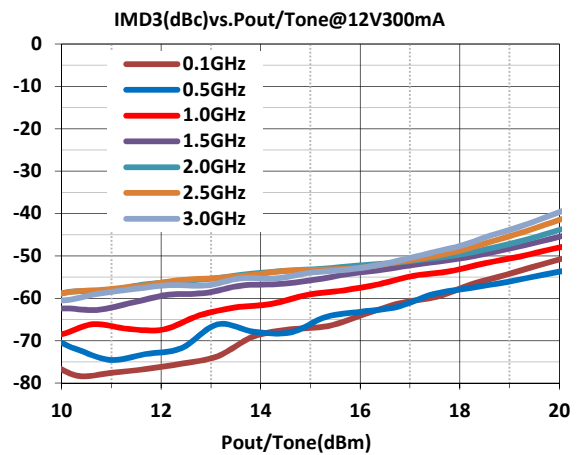
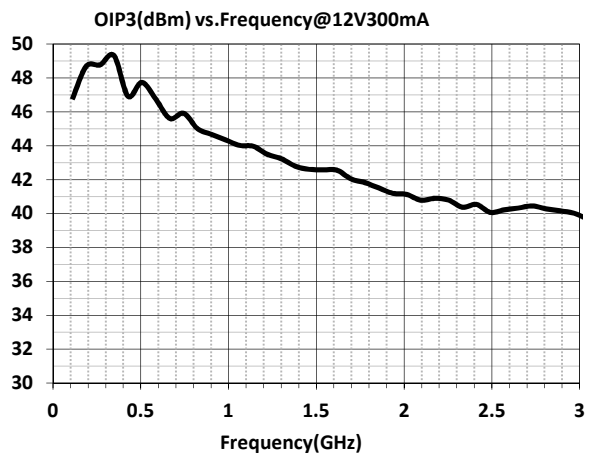
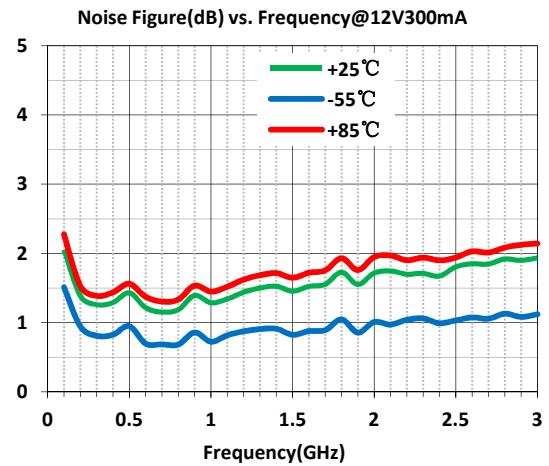
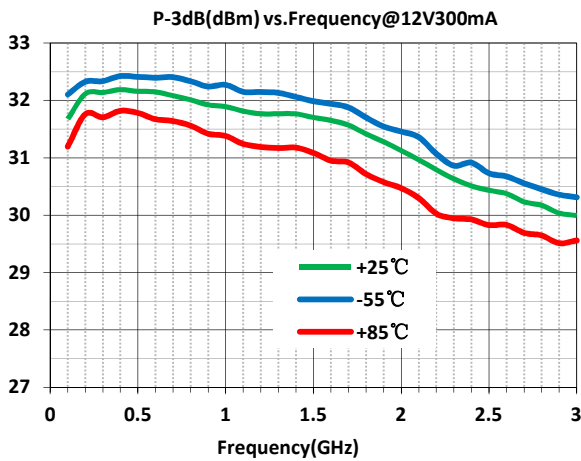
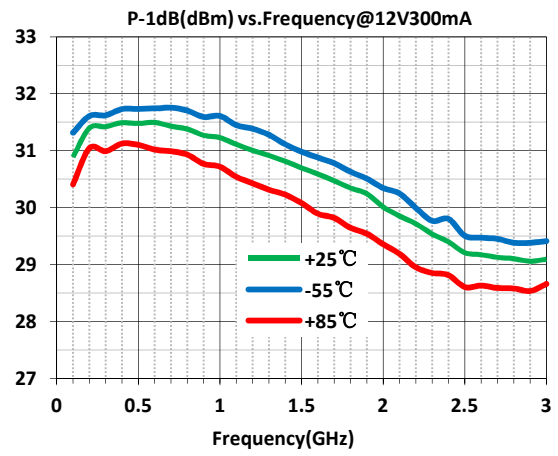
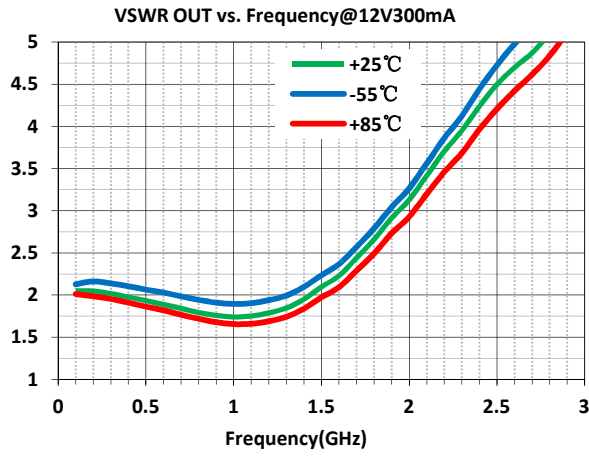


元件清单—100 to 3000MHz

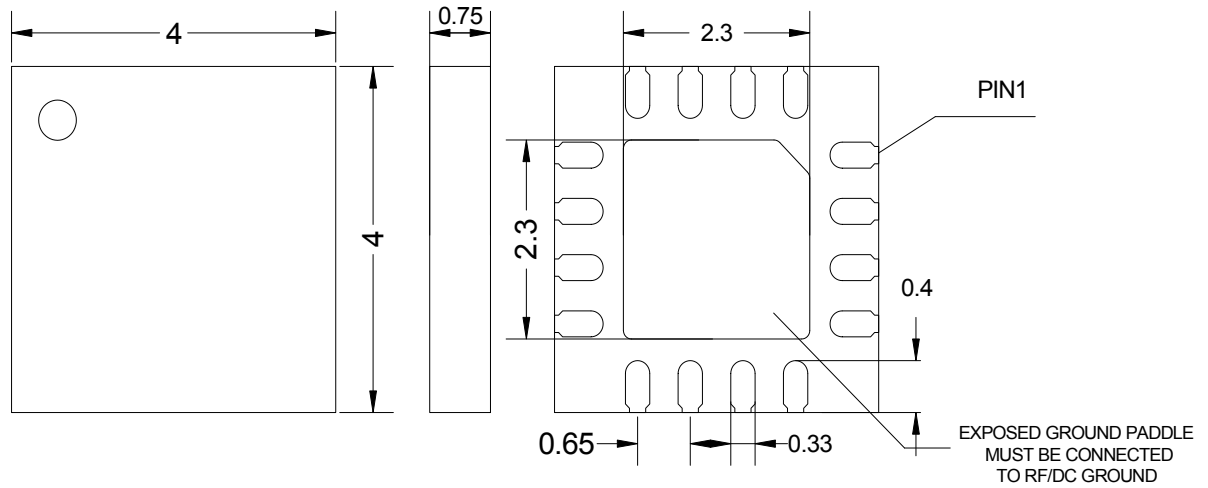
参考编号	零件编号	描述	制造商
U1	HX231220P4	HX231220P4	—
C1,C2,C3,C4,C5,C10,C11,C12	GRM1555C1H102JA01D	1nF ,Cap,0402	AVX
C6,C7	08053C105K4Z2A	1uF,Cap,0805	AVX
C8,C9	1206YD226KAT2A	22uF,Cap,0805	AVX
L1,L2	0805CS-101XJLC	Ind,100nH,0805	COILCRAFT
R1,R2,R3	CRCW080551R0FKEA	Res,0805	Vishay

典型性能测试曲线—100 to 3000MHz





外形和端口尺寸 (mm)



注意事项:

- 1、产品防潮等级为 2a 级，存放环境小于或等于 30° C/60% RH，四周车间寿命；
- 2、撤除真空包装，上回流焊前需在 125+/-5° 环境中烘焙 6 小时，方可焊接。