

产品简介

ZD1232 是一款宽带双路有源功分器，工作频率范围为 50MHz-4GHz，5V 或 3.3V 单供电电压，输入/输出阻抗匹配至 50Ω。

ZD1232 采用砷化镓 pHEMT 工艺制造，采用标准 QFN3x3 16PIN 封装，具有低成本、低噪声和低功耗等特点。

典型应用场景

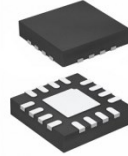
- 光纤到楼 (FTTB)、光纤到户 (FTTH) 接收器
- 多通道机顶盒 (Multi Tuner Set-Top Box)
- 家庭网关 (Home Gateway)


极限最大额定值

参数	数值
存储温度	-55°C~+150°C
工作温度	-40°C~+85°C
极限电压 (VDD)	6V
最大输入功率 (RFIN)	+20dBm
MSL	JEDEC LEVEL 3

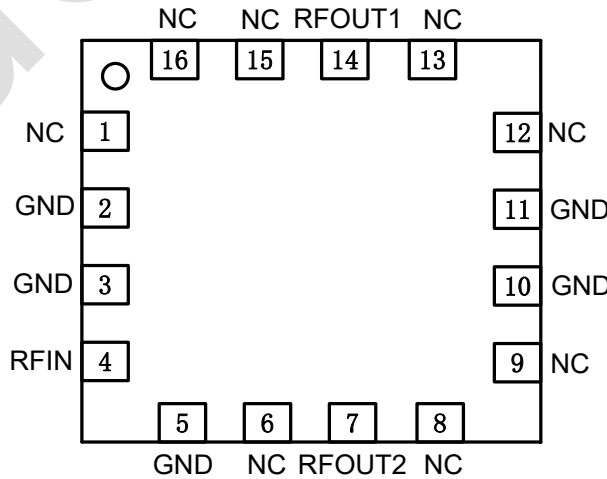
产品特点

- 3V~5V 单电压供电，典型电流 90mA @ 3.3V，105mA @ 5V
- 典型增益：9dB @ 1575MHz、VCC=5V；9dB @ 1575MHz、VC=3.3V
- 典型 OIP3：34dBm @ 1575MHz、VCC=5V；32dBm @ 1575MHz、VCC=3.3V
- 典型 P1dB：20dBm @ 2GHz、VCC=5V；18dBm @ 2GHz、VCC=3.3V
- 输入/输出 50Ω 阻抗匹配
- 绿色无铅 16 脚 QFN3x3 封装



 本产品符合所有相关法规且不含卤素。

管脚示意图 (Top View)



PIN No.	管脚名称	说明
1,6,8,9,12,13,15,16	NC	空。悬空或接地
2,3,5,10,11	GND	地
4	RFIN	射频输入
7	RFOUT2	射频输出 2
14	RFOUT1	射频输出 1
17	EPAD	GND

电气参数

测试条件: VDD=+5V, Temp= +25°C, 50MHz~4GHz 应用电路, 50Ω 测试系统。

参数		数值						单位
频率 (f)		50	500	1575	2500	3000	4000	MHz
增益 (Gain)	RFOUT1	9	9	9	9	8	2	dB
	RFOUT2	9	9	9	10	8	2	
输入回损 (S11)	RFOUT1	-22	-15	-10	-16	-6	-2	dB
	RFOUT2	-22	-15	-10	-16	-6	-2	
输出回损 (S22)	RFOUT1	-17	-25	-20	-12	-9	-8	dB
	RFOUT2	-17	-25	-22	-13	-9	-8	
隔离 (S12)	RFOUT1	-22	-22	-23	-23	-24	-32	dB
	RFOUT2	-22	-22	-23	-23	-23	-34	
	RFOUT1- RFOUT2	-20	-21	-20	-24	-25	-19	
P1dB	RFOUT1	19	20	20	20	21	21	dB
	RFOUT2	19	20	20	21	21	20	
OIP3 ⁽¹⁾	RFOUT1	33	35	34	35	35	31	dB
	RFOUT2	33	35	34	34	35	30	
NF		3.9	3.9	4.0	4.4	5.4	8.9	dB
静态电流 (Iq)		99	99	99	99	99	99	mA
供电电流 (IDD)		111	111	112	110	106	110	mA

注: (1) 两个 tone 间隔 1MHz, 每个 tone 输出功率+0dBm,

电气参数

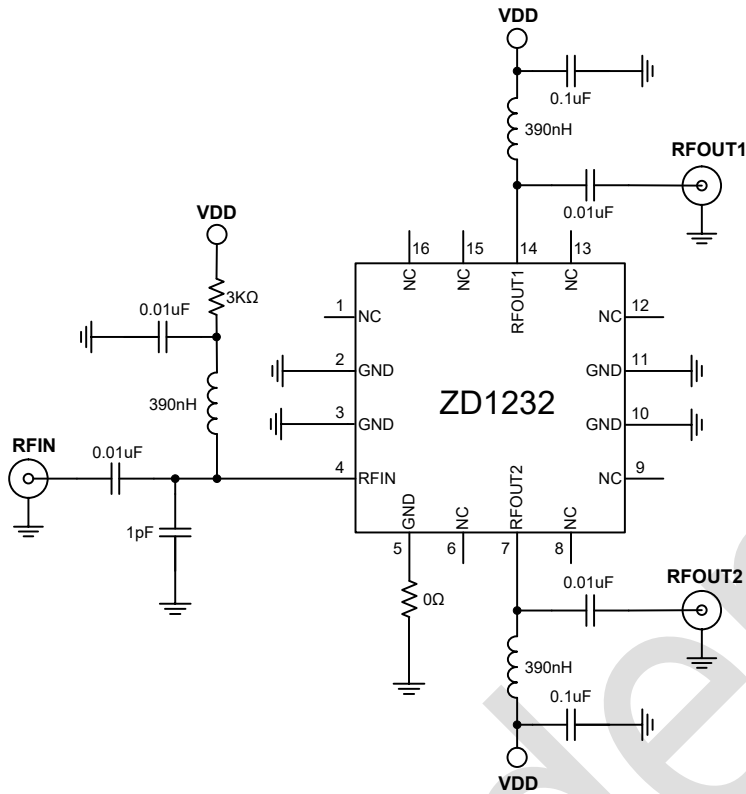
测试条件: VDD=+3.3V, Temp= +25°C, 50MHz~4GHz 应用电路, 50Ω 测试系统。

参数		数值						单位
频率 (f)		50	500	1575	2500	3000	4000	MHz
增益 (Gain)	RFOUT1	9	9	9	9	8	2	dB
	RFOUT2	9	9	9	10	8	2	
输入回损 (S11)	RFOUT1	-22	-15	-10	-16	-6	-2	dB
	RFOUT2	-23	-15	-10	-16	-6	-2	
输出回损 (S22)	RFOUT1	-17	-24	-20	-12	-8	-7	dB
	RFOUT2	-17	-24	-23	-12	-8	-8	
隔离 (S12)	RFOUT1	-22	-22	-23	-23	-25	-31	dB
	RFOUT2	-22	-22	-23	-23	-26	-35	
	RFOUT1- RFOUT2	-20	-22	-20	-23	-24	-19	
P1dB	RFOUT1	16	17	18	18	18	17	dB
	RFOUT2	16	17	18	18	18	17	
OIP3 ⁽¹⁾	RFOUT1	33	35	32	30	29	28	dB
	RFOUT2	33	35	32	29	29	28	
NF		4.0	3.9	4.0	4.4	5.3	8.7	dB
静态电流 (Iq)		90	90	90	90	90	90	mA
供电电流 (IDD)		108	106	105	105	105	110	mA

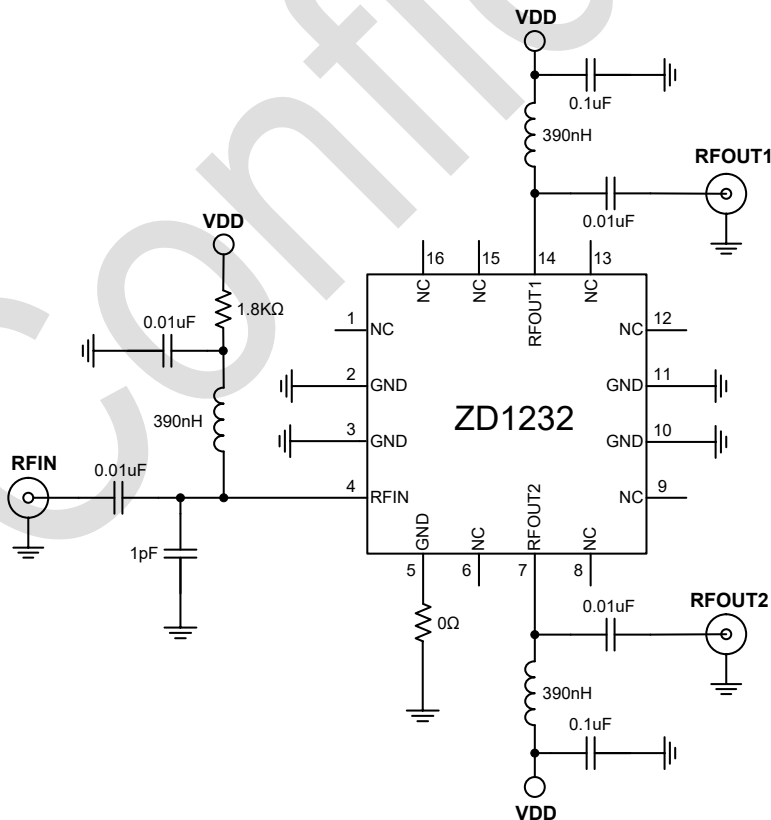
注: (1) 两个 tone 间隔 1MHz, 每个 tone 输出功率+0dBm,



应用电路（5V）



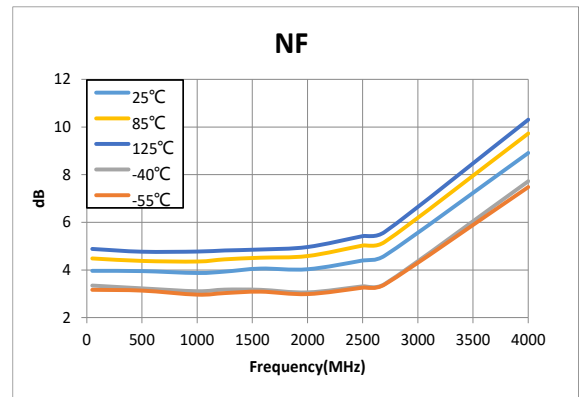
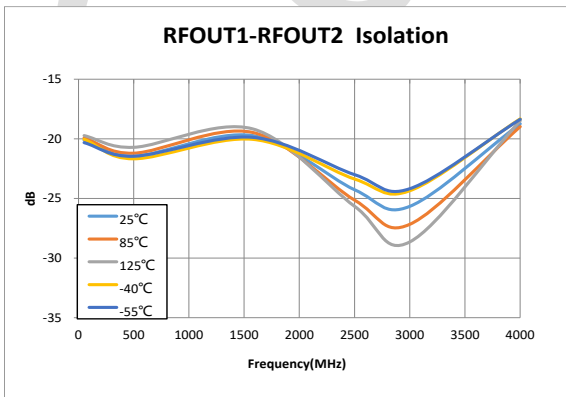
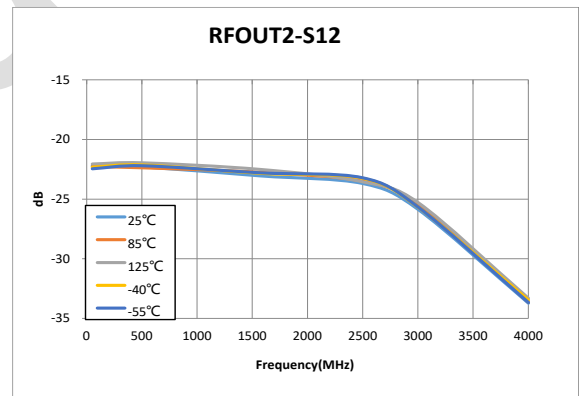
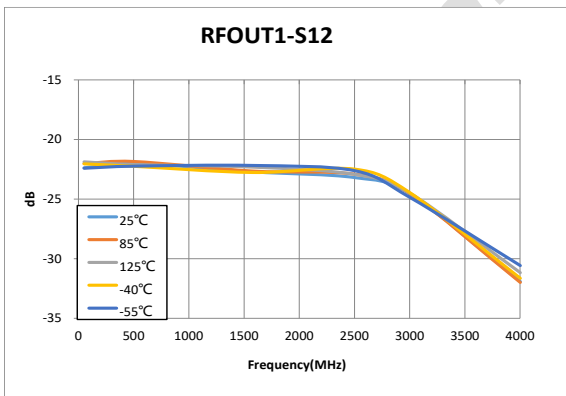
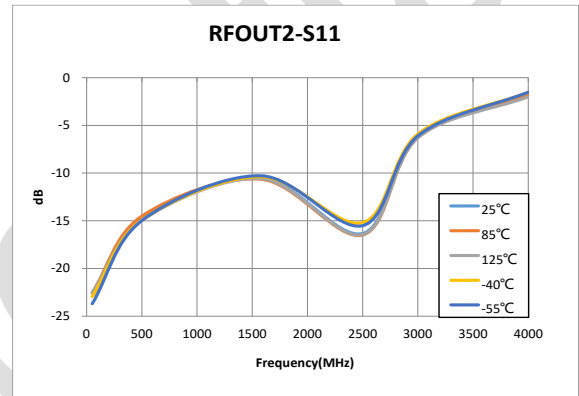
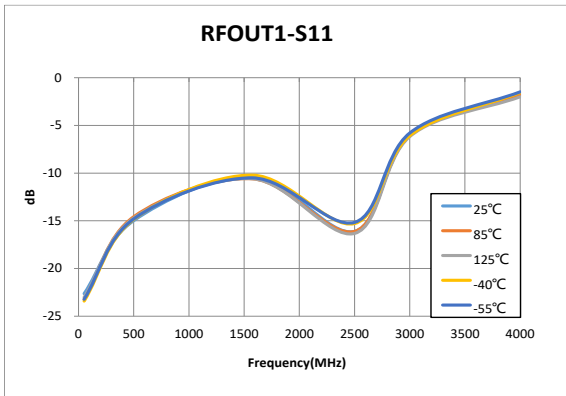
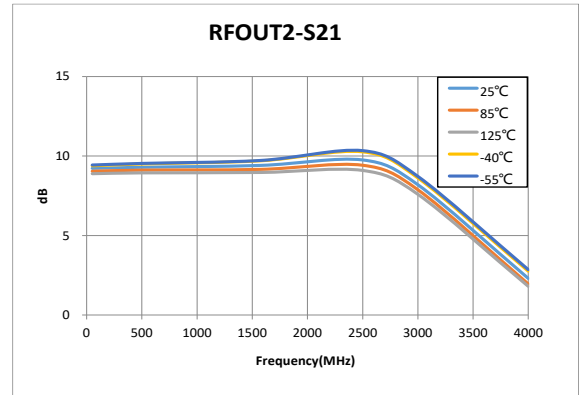
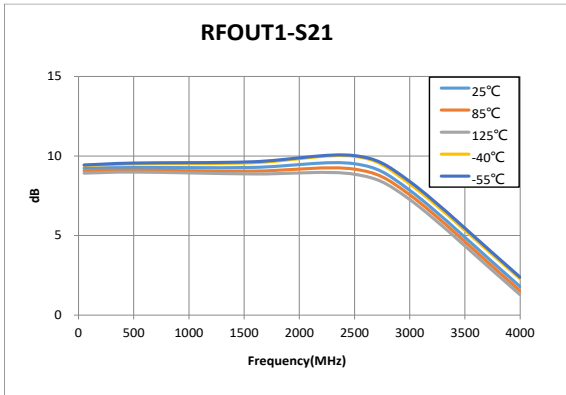
应用电路（3.3V）





典型性能曲线图（50MHz~4GHz、VDD=5V）

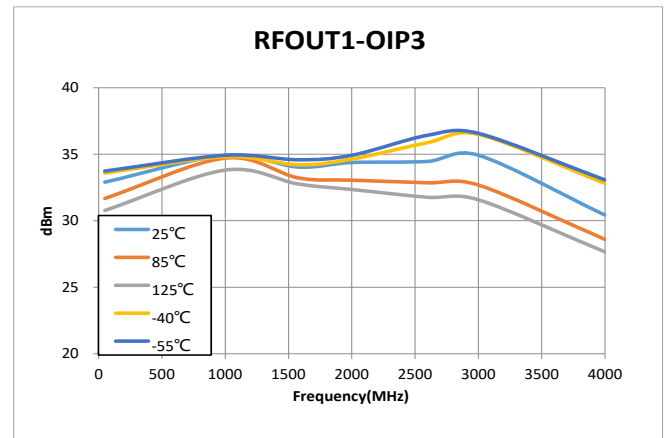
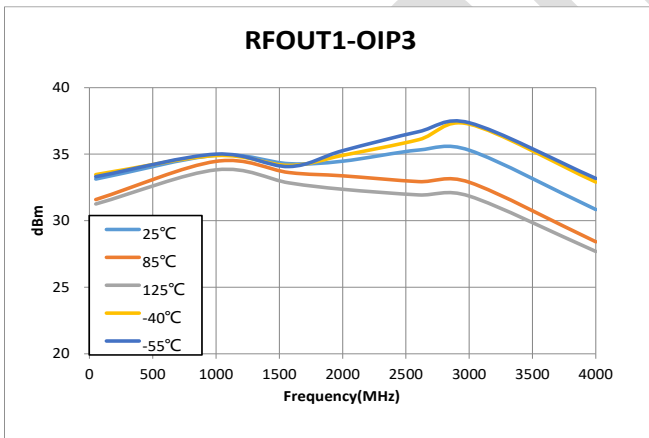
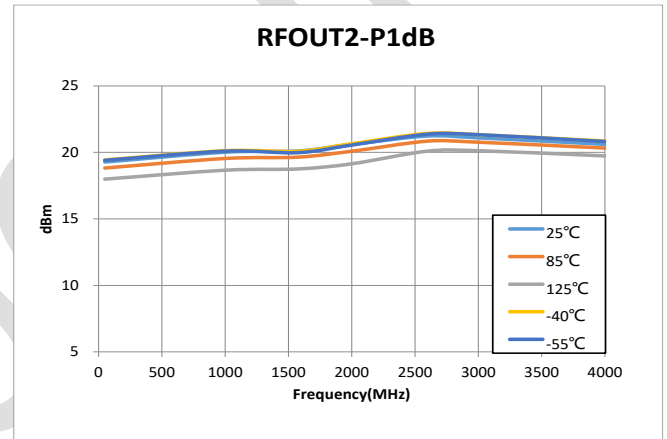
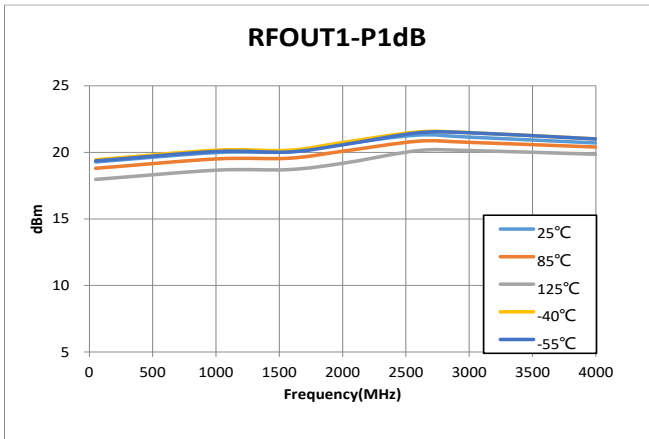
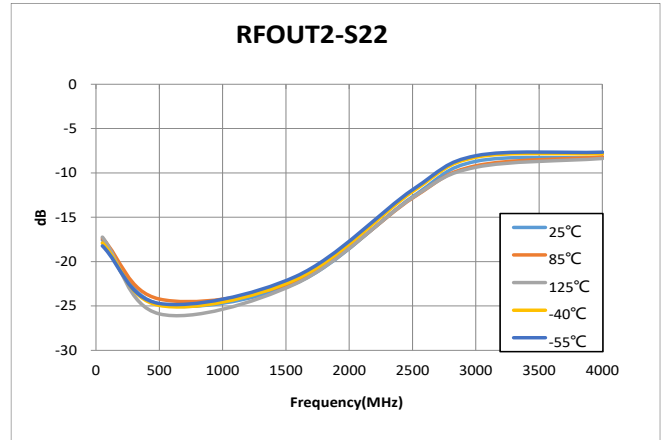
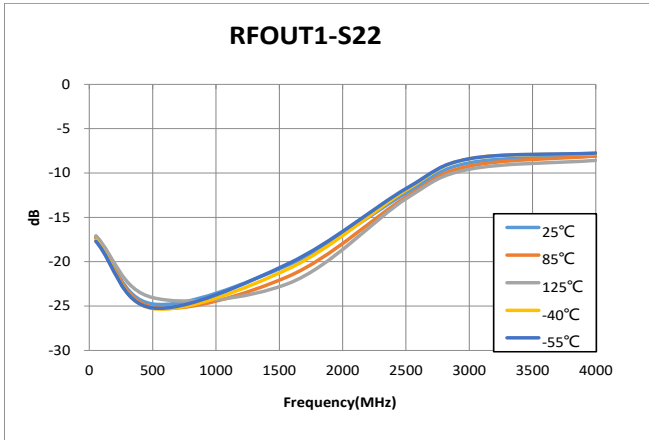
测试条件：VDD=+5V，Temp= +25°C，50MHz~4GHz 应用电路，50Ω 测试系统。





典型性能曲线图（50MHz~4GHz、VDD=5V）

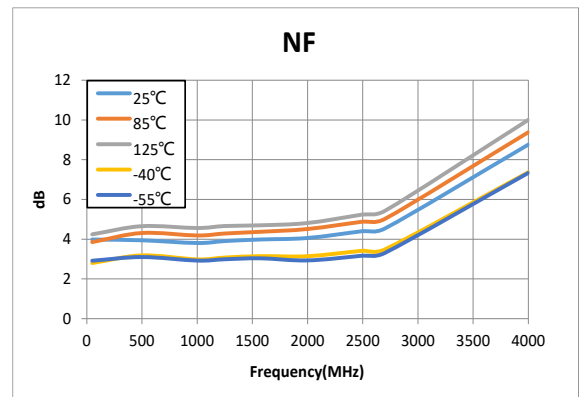
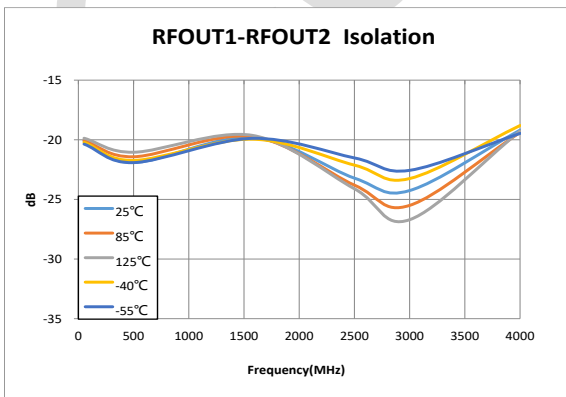
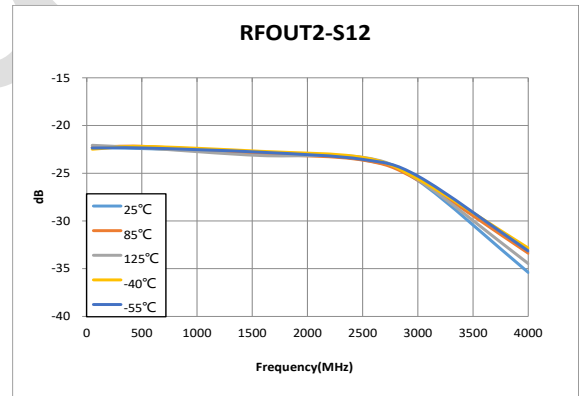
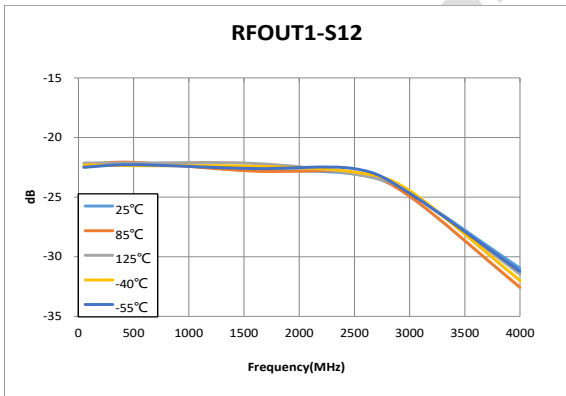
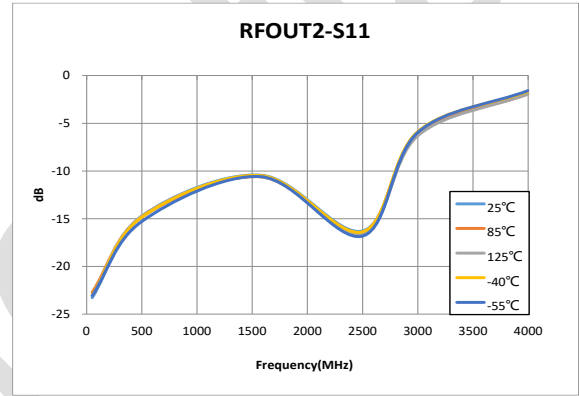
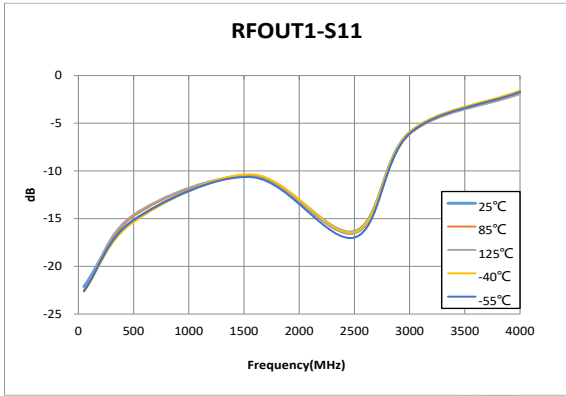
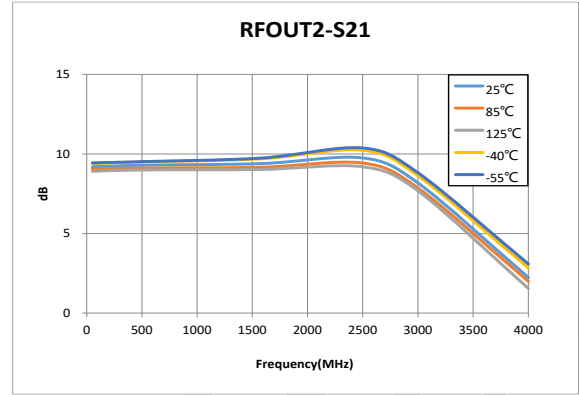
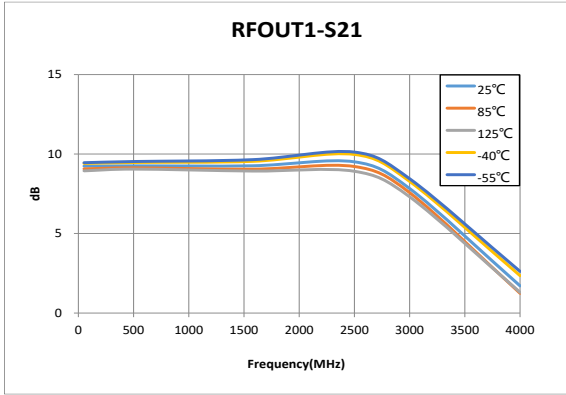
测试条件：VDD=+5V，Temp= +25°C，50MHz~4GHz 应用电路，50Ω 测试系统。





典型性能曲线图（50MHz~4GHz、VDD=3.3V）

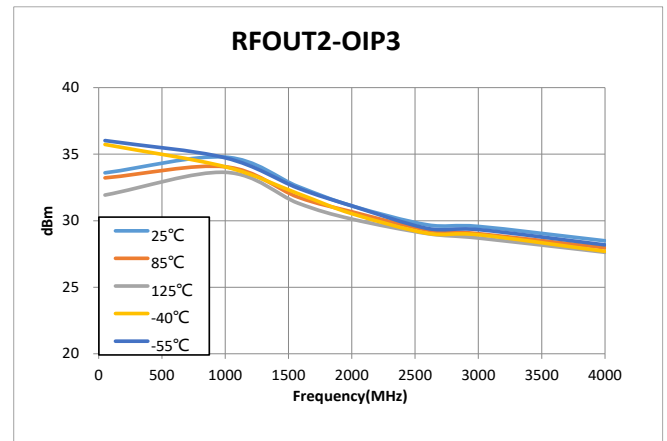
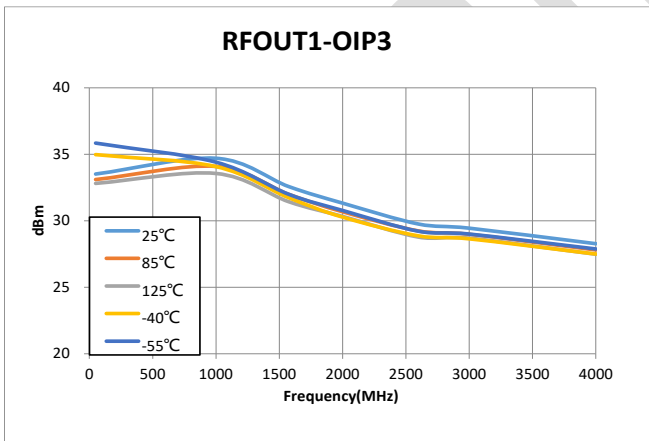
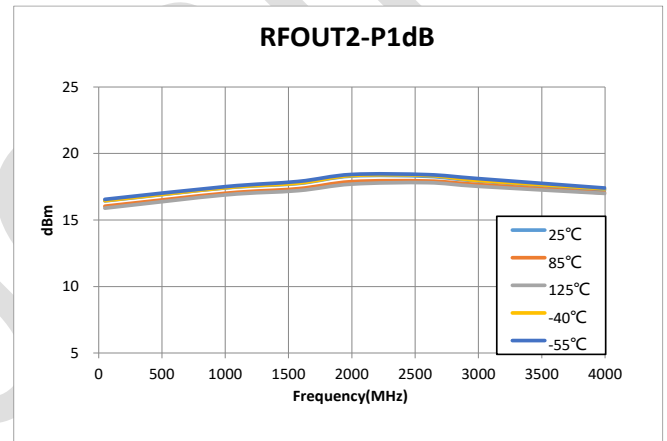
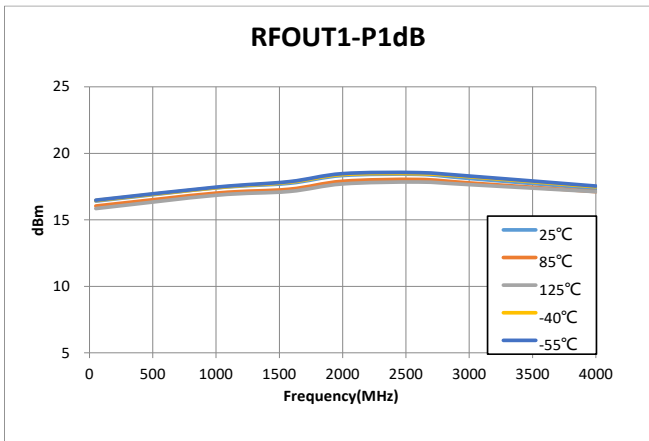
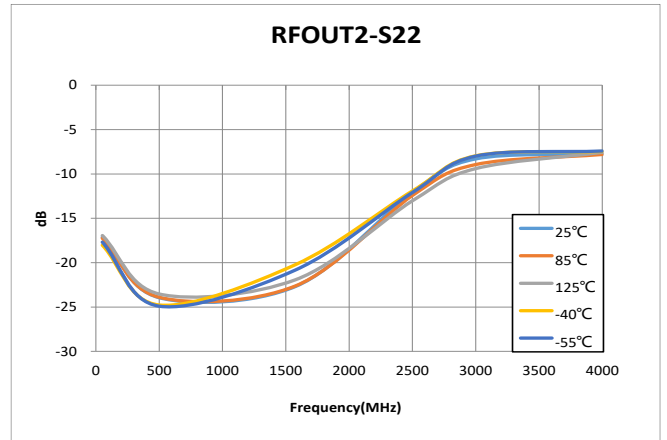
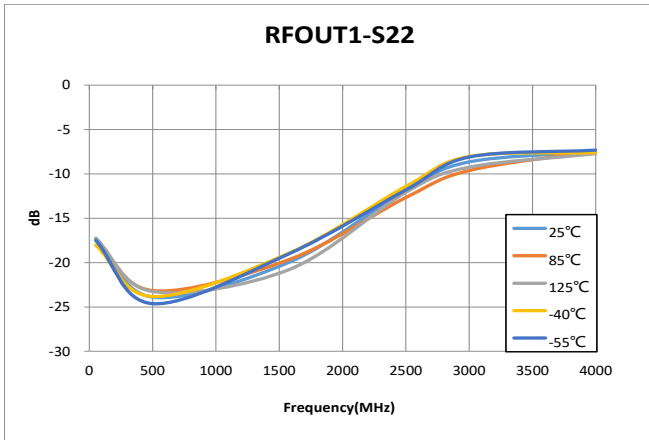
测试条件：VDD=+3.3V，Temp= +25°C，50MHz~4GHz 应用电路，50Ω 测试系统。





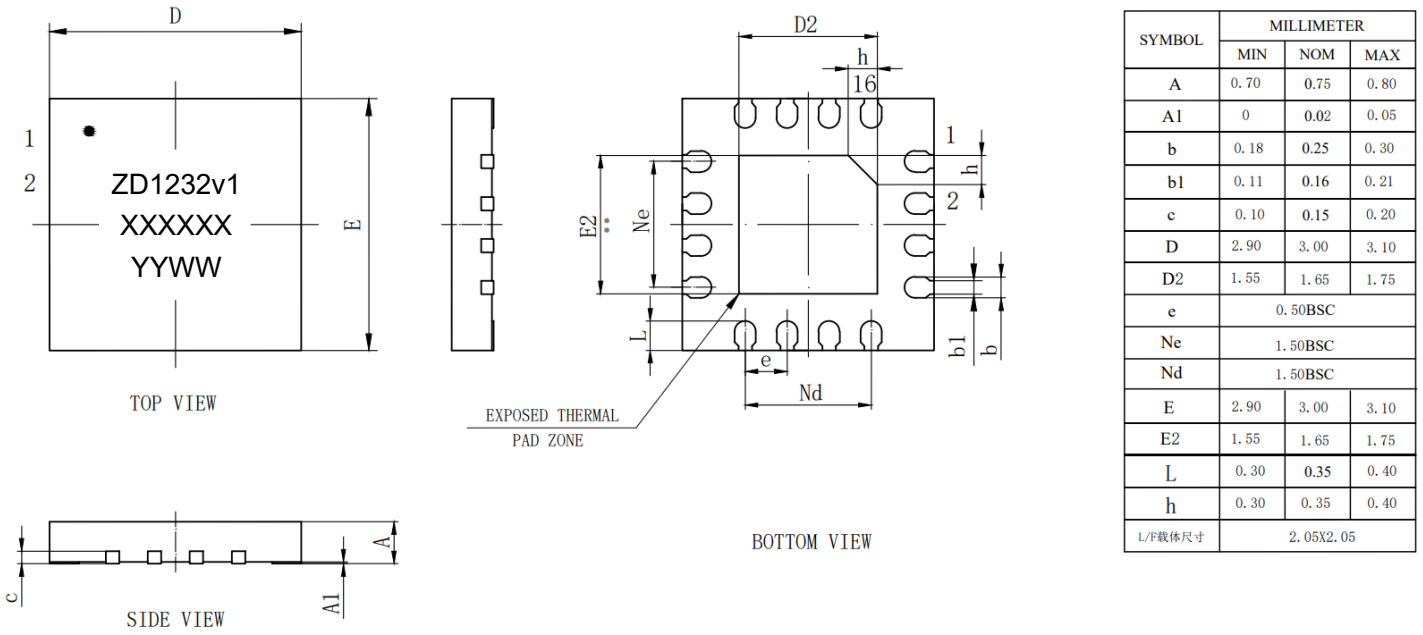
典型性能曲线图（50MHz~4GHz、VDD=3.3V）

测试条件：VDD=+3.3V，Temp= +25°C，50MHz~4GHz 应用电路，50Ω 测试系统。





封装尺寸图



订单信息

型号	丝印	封装	最小包装
ZD1232	ZD1232	QFN3x3-16	3,000