

ADIC450LP4

V0

性能特点

- 工作频段: DC - 4 GHz
- 衰减范围: 0.5 - 31.5 dB
- P1dB: 27 dBm
- IIP3: 55 dBm
- ESD: 500 V HBM
- 24-pin 4 mm × 4 mm × 0.75 mm
QFN leadless package

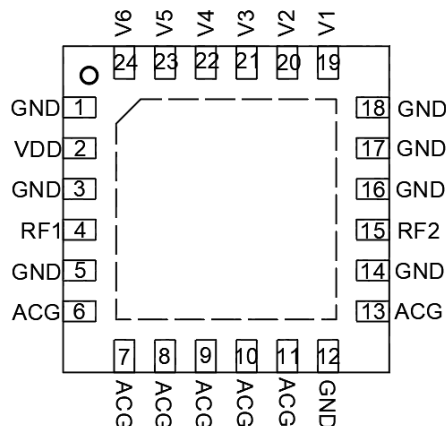
产品简介

ADIC450LP4是一款频率覆盖DC- 4 GHz的数控衰减器。该产品在整个工作频段的插入损耗小于4 dB, 其基本衰减位为0.5 dB、1 dB、2 dB、4 dB、8 dB、16 dB, 总衰减量为31.5 dB。在整个工作频率范围内具有优良的衰减特性和端口驻波特性。非常适合应用于微波混合集成电路和多芯片模块以及低功耗系统。

极限参数

射频输入功率	+30 dBm
偏置电压VDD	+7 V
控制电压范围 (V1 - V6)	VDD + 0.5 V
工作温度	-40 °C~+125 °C
储存温度	-65 °C~+150 °C
MSL	Level 2

引脚定义



俯视透视图

引脚编号	符号	功能描述
4, 15	RF1, RF2	RF端口
2	VDD	偏置电压
19, 20, 21 22, 23, 24	V1, V2, V3, V4, V5, V6	控制端口
6, 7, 8, 9, 10, 11, 13	ACG	需要接电容到地
其它	GND	



关注公众号



ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS

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电性能表 (VDD = +5 V, ID = 1 mA, OIP3 Tone Spacing=5 MHz, Two-tone inputs power=+18 dBm)

指标	最小值	典型值	最大值	单位	范围
频率范围	DC		5	GHz	
插入损耗		1.3	1.6	dB	DC - 1 GHz
		1.6	2		1 - 2 GHz
		2	2.4		2 - 3 GHz
		2.4	3.0		3 - 4 GHz
		3.2	4.0		4 - 5 GHz
回波损耗		1.2	1.5		DC - 3 GHz
		1.5	2.0		3 - 4 GHz
衰减精度	± (0.2+3% of Setting) ± (0.3+3% of Setting)			dB	DC - 3 GHz 3 - 5 GHz
IP3		55		dBm	0.1 - 3 GHz
P1dB		27		dBm	0.1 - 3 GHz
VDD	2.2	5.0	5.5	V	
IDD		1	1.5	mA	
开关速率			100	KHz	
开关时间		300	800	ns	10%-90% or 90%-10% RF
		600	100	ns	50%CTL to 90%/10% RF

真值表

控制电压						衰减状态
V1	V2	V3	V4	V5	V6	
16dB	8dB	4dB	2dB	1dB	0.5dB	
High	High	High	High	High	High	参考态
High	High	High	High	High	Low	0.5 dB
High	High	High	High	Low	High	1 dB
High	High	High	Low	High	High	2 dB
High	High	Low	High	High	High	4 dB
High	Low	High	High	High	High	8 dB
Low	High	High	High	High	High	16 dB
Low	Low	Low	Low	Low	Low	31.5 dB

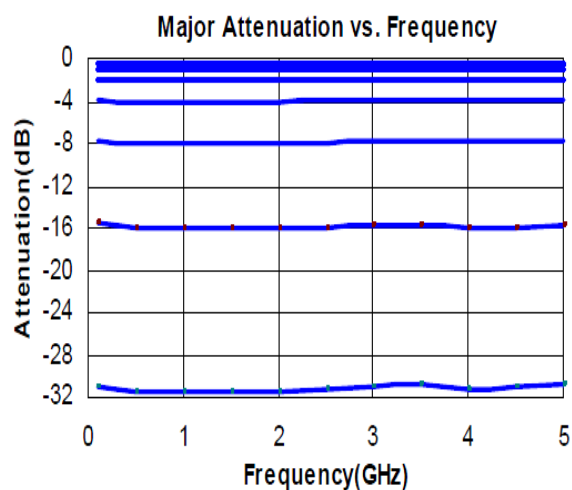
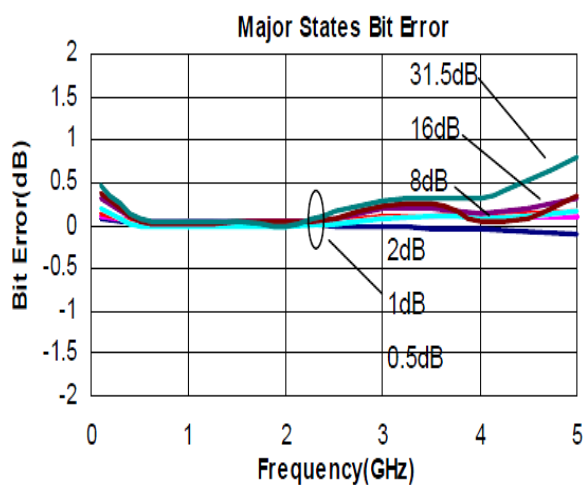
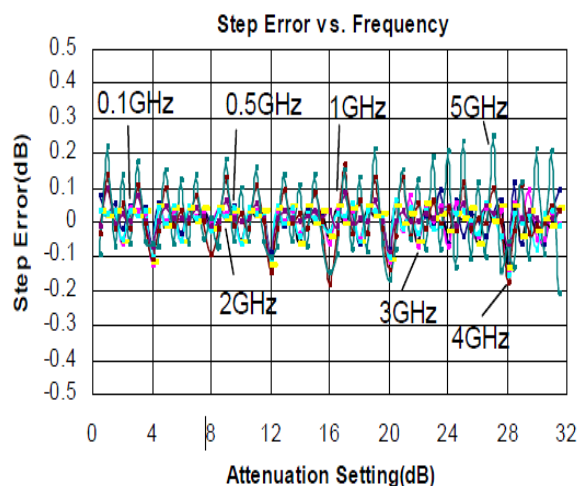
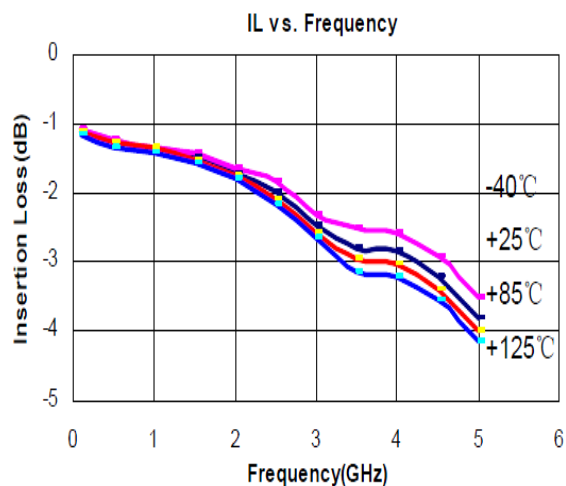
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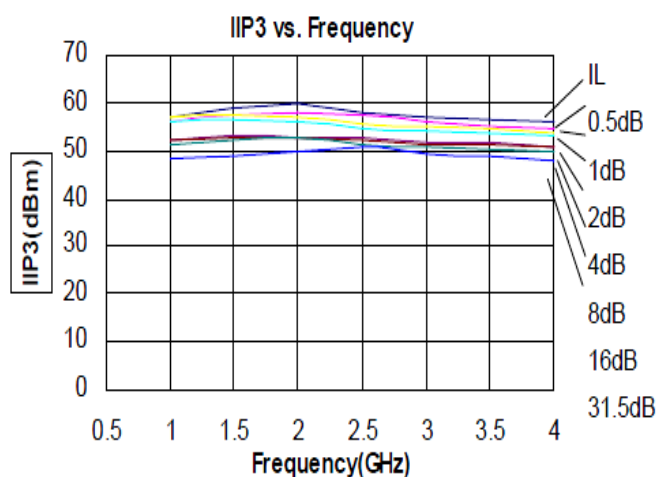
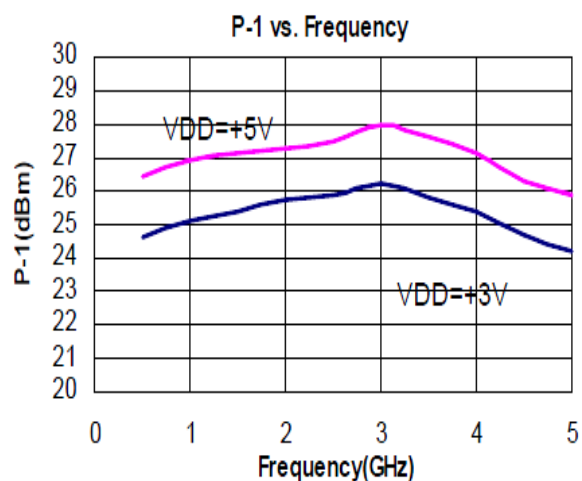
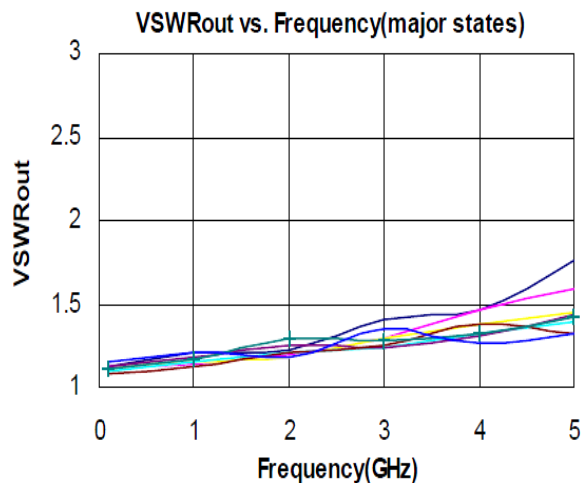
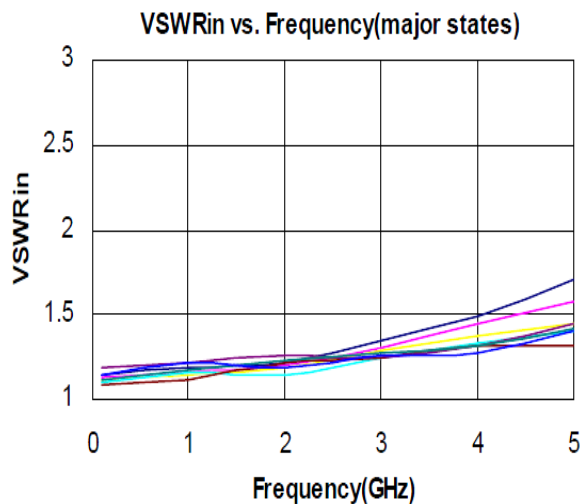
控制电压 vs. VDD

VDD	VHIGH		VLOW	
	min	max	min	max
+3 V	+1.9 V	VDD+0.5 V	-0.2	+1.2 V
+5 V	+2.5 V	VDD+0.5 V	-0.2	+1.5 V

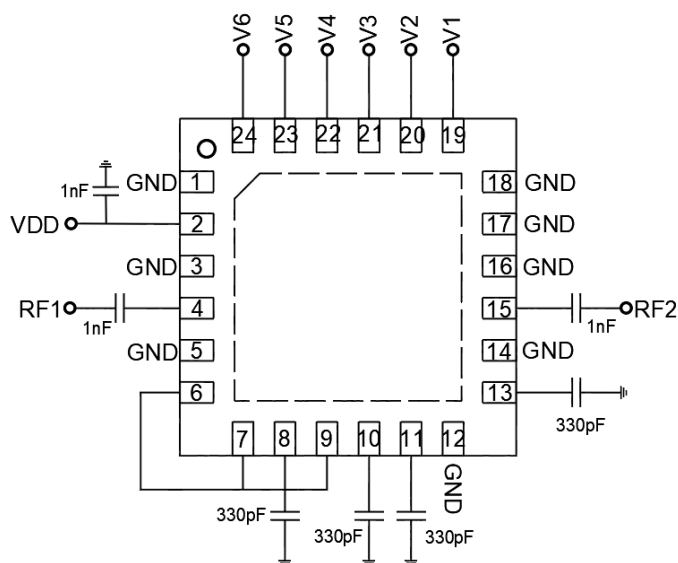
典型测试曲线



典型测试曲线



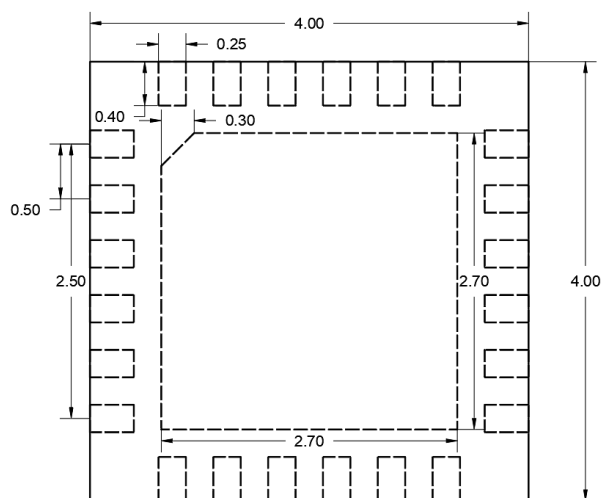
应用电路



ADIC450LP4

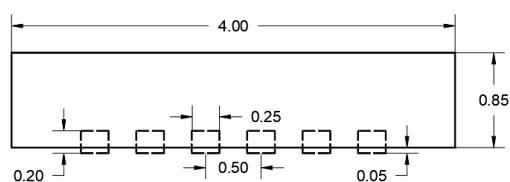
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外形尺寸



俯视透视图

单位: mm



侧视图

建议引脚PCB

