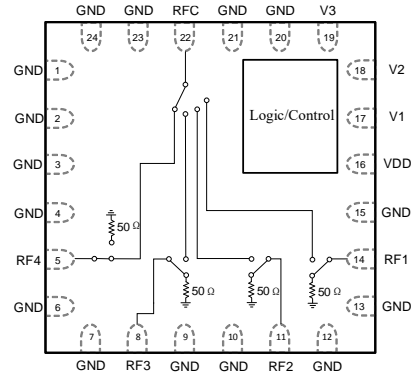




主要特点

- 工作频段: DC ~ 6 GHz
- 插损: 1.5 dB
- 隔离度: 40 dB
- P-0.1: 35 dBm
- IIP3: 56 dBm
- 耐功率: +35 dBm (公共端), +29 dBm (负载端)
- I/O 控制电平: 兼容 1.8V/2.5V/3.3V LVTTTL, 5V TTL
- ESD: 2kV HBM
- 封装: 24 Lead, 4mmx4mm QFN

功能框图

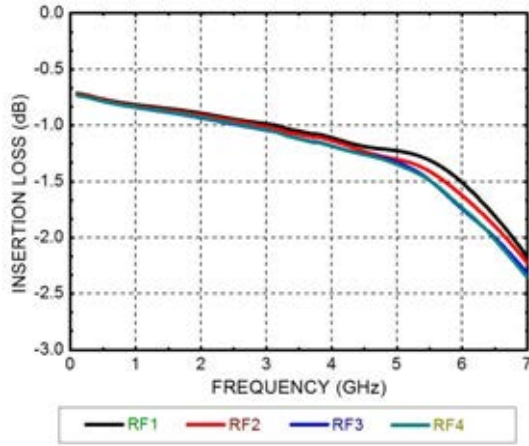


性能指标 ($T_A = +25^\circ\text{C}$, $V_{DD}=2.5\text{V}\sim 5\text{V}$, $V_{CTL}=0\text{V}/V_{DD}$, 50Ω)

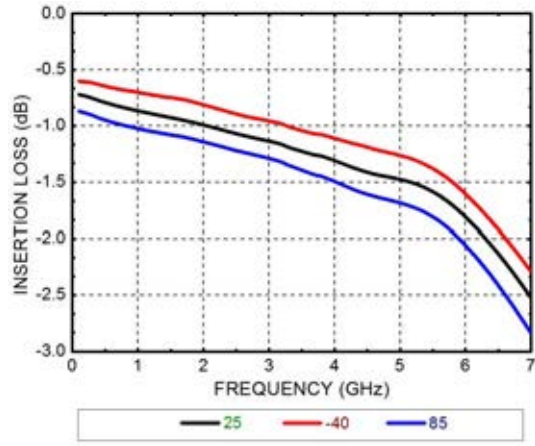
参数	条件		最小	典型	最大	单位
插损	0.1GHz~2.0GHz			0.8	0.9	dB
	2.0GHz~4.0GHz			1.1	1.2	dB
	4.0GHz~6.0GHz			1.5	1.7	dB
隔离度	RFC~RFX	0.1GHz~2.0GHz	70	60		dB
		2.0GHz~4.0GHz	50	55		dB
		4.0GHz~6.0GHz	40	45		dB
	RFX~RFX	0.1GHz~2.0GHz	65	55		dB
		2.0GHz~4.0GHz	42	45		dB
		4.0GHz~6.0GHz	35	38		dB
回波损耗	开态	0.1GHz~2.0GHz		22		dB
		2.0GHz~4.0GHz		20		dB
		4.0GHz~6.0GHz		17		dB
	关态	0.1GHz~2GHz		18		dB
		2.0GHz~4.0GHz		18		dB
		4.0GHz~6.0GHz		16		dB
开关时间	导通	50% VCTL to 90% RF		300		ns
	关断	50% VCTL to 10% RF		150		ns
输入功率压缩点	P-0.1	VDD=5V		35		dBm
	P-1	VDD=5V		35		dBm
IIP3	POUT=12dBm/tone			56		dBm
工作电压	VDD		2.5	3	5	V
控制电压范围	V1, V2, V3		0		VDD	V
控制电压输入电平范围	VDD=+5.0V	低电平 (VIL)	0		0.6	V
		高电平 (VIH)	1.1		VDD	V
功耗	VDD=+5.0V			65		μA



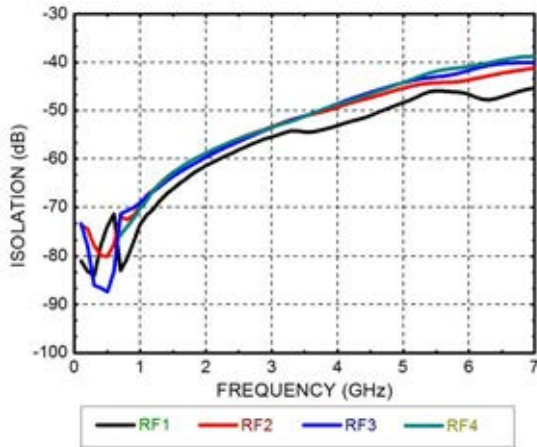
插损 vs. 温度



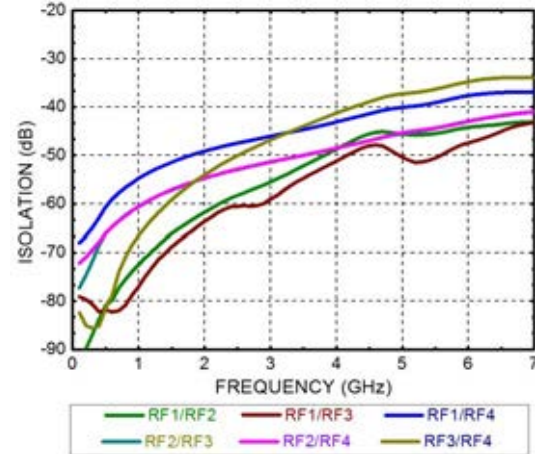
插损 vs. 频率



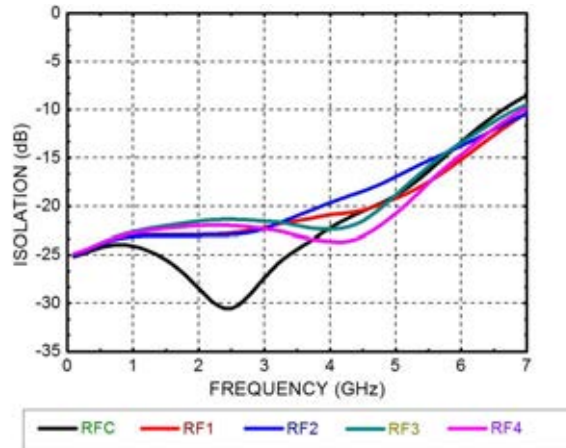
RFC-RFX 隔离度



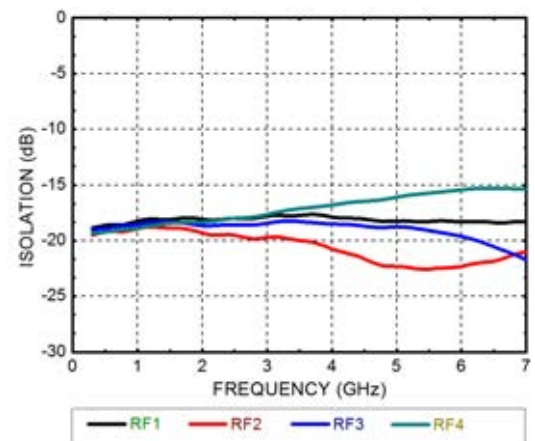
RFX-RFX 隔离度



回波损耗 (导通态)



回波损耗 (关断态)





中科海高
HiGaAs Microwave

V0.1.2019

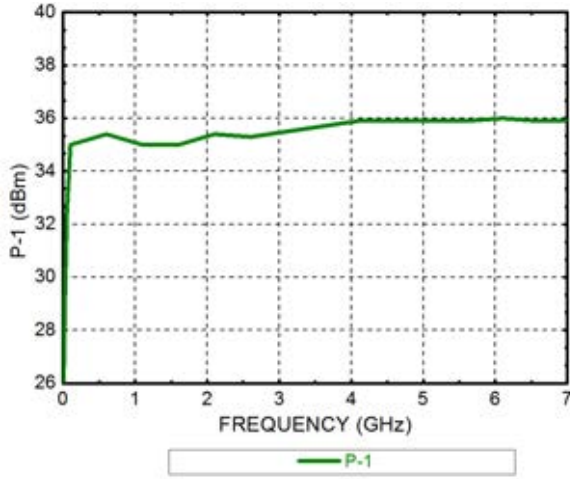
HGC1010LP4

Silicon SP4T
吸收式开关, DC - 6 GHz

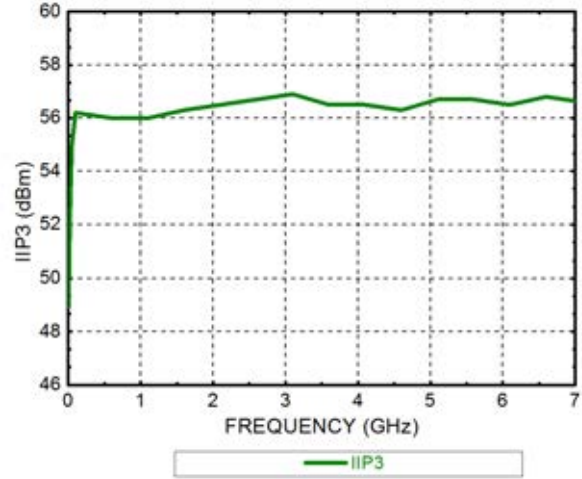
5

开关
—
塑封

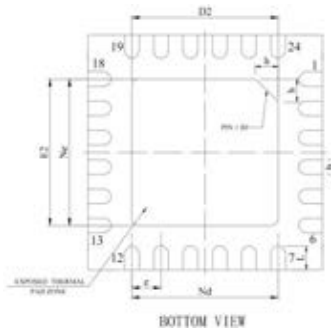
输入P_{-0.1}



IIP3



封装框架



单位: mm

TOP VIEW

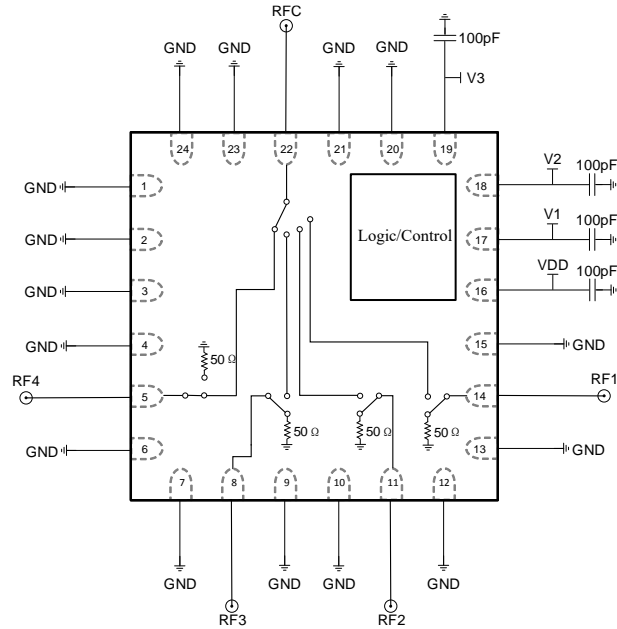
SIDE VIEW

BOTTOM VIEW

SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.65	0.75	0.85
A1	—	0.02	0.05
b	0.20	0.25	0.30
c	0.18	0.20	0.25
D	3.90	4.00	4.10
D2	2.40	2.50	2.60
e	0.50BSC		
Ne	2.50BSC		
Nd	2.50BSC		
E	3.90	4.00	4.10
E2	2.40	2.50	2.60
L	0.35	0.40	0.45
h	0.35	0.40	0.45



应用框图



控制关系

状态	V1	V2	V3
Unsupported	0	0	0
RFC-RF1 ON	1	0	0
RFC-RF2 ON	0	1	0
RFC-RF3 ON	1	1	0
RFC-RF4 ON	0	0	1
ALL OFF	1	0	1
ALL OFF	0	1	1
Unsupported	1	1	1

极限参数

参数	备注	数值	单位
工作电压	VDD	5.5	V
控制电压	V1, V2, V3	5.5	V
射频输入功率	直通	35	dBm
	负载	29	dBm
存储温度	-	-65~150	°C
热阻	直通	110	°C/W
	负载	100	°C/W
ESD	HBM	2	kV