

Main Amplifier For Optical Communication

The HS6907 is a fixed gain amplifier for fiber optic system.

It achieves a high gain (17 dB) and very wide bandwidth (DC 2 GHz).

Features

- Band width ; 2.4 GHz.
- Maximum Gain ; 17 dB
- Providing output peaking capability.
- 50 Ω line driving capability.
- Single power supply of -6.0 V.
- 32pin package containing internal decoupling capacitors and input termination registers of 50 Ω .

Absolute Maximum Ratings

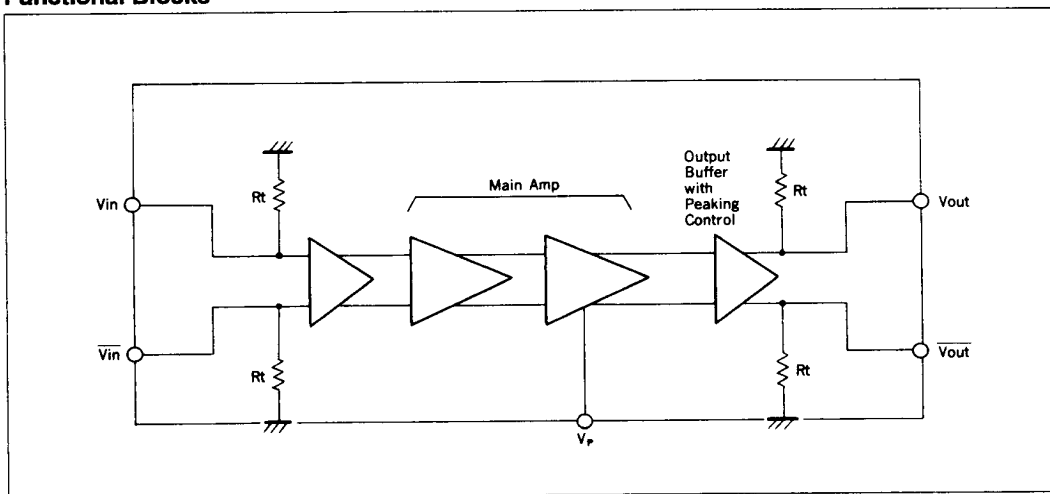
Item	Symbol	Rating	Unit	Remarks
Supply Voltage	Vss	+0.5 to -7.5	V	
Input Voltage	VinH	0	V	
Input Voltage	VinL	VSS	V	
Supply Current	Iss	500	mA	
Power	Pt	1.0	W	
Storage Temperature	Tstg	-65 to $+150$	$^{\circ}\text{C}$	
Operating Temperature	Ta	-10 to $+80$	$^{\circ}\text{C}$	

Recommended Operating Conditions

Item	Symbol	Typ	Min	Max	Unit	Remarks
Supply Voltage	Vss	-6.00	-6.30	-5.70	V	
Input Voltage	Vin	—	6.0	180	mV	

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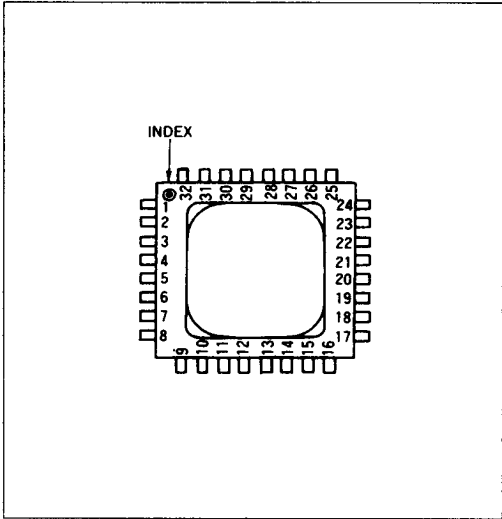
Functional Blocks



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Pin Descriptions



Pin No.	Function	Pin No.	Function
1	Vp (Peaking Control)	17	Vss
2	Vss	18	(Bias Monitor)
3	(Bias Monitor)	19	GND
4	(Bias Monitor)	20	(Bias Monitor)
5	Vss	21	(Bias Monitor)
6	(Bias Monitor)	22	(Bias Monitor)
7	(Bias Monitor)	23	Vss
8	Vss	24	GND
9	GND	25	N/C
10	GND	26	GND
11	Vin	27	H/C
12	GND	28	GND
13	VSS	29	Vout
14	GND	30	GND
15	VIn	31	Vout
16	GND	32	GND

Note: N/C; No Connection

DC Characteristics (Vss: -6.0 V ± 5% Ta: -10°C 80°C)

Item	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage	Vin		-120	-150	-190	mV
Output Voltage	Vout		-1.2	-1.0	-0.75	V
Supply Current	Iss			140		mA

AC Characteristics

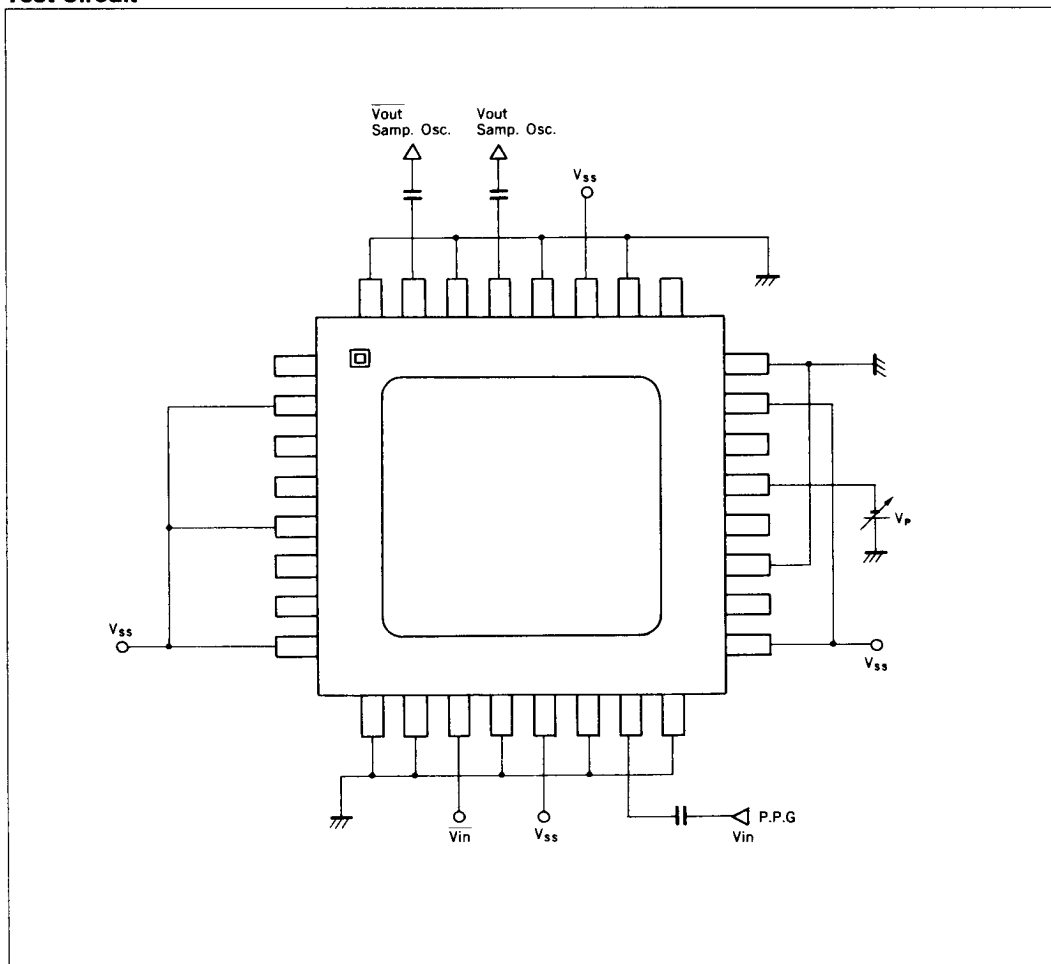
Item	Symbol	Test Conditions	Min	Typ	Max	Unit
Band Width	fb	Vin = 6 mVp-p		2.4		GHz
Gain	Gmax			17		dB

Packaging Information

Part No.	Package
HS6907	FG-32

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Test Circuit



Precautions

The GaAs IC could be damaged or destroyed if charged with high static electricity. Please have all equipments discharged before connecting the device.

This production contains GaAs, Only a few GaAs are still very harm for human. Don't decompose or process into powder or vapor.

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