



Amplifier

ID: 019

Name**AMP-14****Description**

This op-amp is designed for on chip signal processing. It is compensated for stable operation at unity gain frequency. The results are simulated with extracted parasitics.

Conditions

Temperature	27°C
Reference Current (I _{ref})	20 µA
V _{DD}	2.5 V
V _{SS}	-2.5 V
Load	10 pF

Simulated Data

Parameter	Symbol	Unit	Min	Typ	Max	Condition
Supply Voltage	V _{DD}	V		5		
Reference Current	I _{ref}	µA		20		
Supply Current	I _{DD}	µA			655	Unity Gain
Input Offset Voltage	V _{IO}	mV	4.93			Unity Gain, No Parasitics, deltaL=0.1µm
TK V _{IO}	TK(V _{IO})	µV/K	6.5			Unity Gain, No Parasitics, deltaL=0.1µm
Voltage Gain	v	dB	79.9			
Transit Frequency	f _T	MHz	10.62			
Phasemargin	↑ _m	deg	50			
0.01% Settling Time		ns	265			Amplitude = 0.5 V
Slew Rate	S	V/µs	22			Amplitude = 0.5 V
Maximum Large Signal Frequency		kHz	1000			Amplitude = +/- 2V
Output Swing	V _{OUT}	V	-1.69		1.9	< 10 ppm
			-1.4		1.89	< 5 ppm
Static Nonlinearity		ppm			5	V _{DD} = +5 V, Unity Gain
Commonmode Range	V _{CM}	V	-2			CMRR > 102dB
			2			CMRR > 191dB
Commonmode Rejection Ratio	CMRR	dB	154			f _{CM} = 10 Hz, V _{CM} = 0V
Power Supply Rejection Ratio	PSRR	dB	141			f _{PS} = 1 kHz