



Amplifier

ID: 018

Name**AMP-13****Description**

This rail-to-rail op-amp is designed to drive resistive loads. 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})	5 µA
V _{DD}	2.5 V
V _{SS}	-2.5 V
Load	100 kOhms 2 pF

Simulated Data

Parameter	Symbol	Unit	Min	Typ	Max	Condition
Supply Voltage	V _{DD}	V		5		
Reference Current	I _{ref}	µA		5		
Supply Current	I _{DD}	µA			363	Unity Gain
Input Offset Voltage	V _{IO}	mV	1.23			Unity Gain, No Parasitics, delta L=0.1µm
TK V _{IO}	TK(V _{IO})	µV/K	6.5			Unity Gain, No Parasitics, delta L=0.1µm
Voltage Gain	v	dB	134			
Transit Frequency	f _T	MHz	2.69			
Phasemargin	↑ I _m	deg	67			
0.01% Settling Time		ns	1600			Amplitude = 0.5 V
Slew Rate	S	V/µs	1.44			Amplitude = 0.5 V
Maximum Large Signal Frequency		kHz	110			Amplitude = +/- 2V
Output Swing	V _{OUT}	V	-2.49		2.49	< 5 ppm
Static Nonlinearity		ppm			5	V _{DD} = +5 V, Unity Gain
Common Mode Range	V _{CM}	V	-0.5			CMRR > 226dB
			1.75			CMRR > 167dB
Common Mode Rejection Ratio	CMRR	dB	215			f _{CM} = 10 kHz, V _{CM} = 0V
Power Supply Rejection Ratio	PSRR	dB	201			f _{PS} = 1 Hz