Amplifier				ID:	015	

Name   **AMP-10**

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 (Iref)	20 µA
V_{DD}	2.5 V
V_{SS}	-2.5 V
Load	10 kOhms || 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			1028	Unity Gain
Input Offset Voltage	V_{IO}	mV	2.1			Unity Gain, No Parasitics, delta L=0.1µm
TK V_{IO}	TK(V_{IO})	µV/K	12.85			Unity Gain, No Parasitics, delta L=0.1µm
Voltage Gain	v	dB	93.4			
Transit Frequency	f_T	MHz	4.66			
Phasemargin	$\hat{I}_m$	deg	70			
0.01% Settling Time		ns	400			Amplitude = 0.5 V
Slew Rate	S	V/µs	5.3			Amplitude = 0.5 V
Maximum Large Signal Frequency		kHz	250			Amplitude = +/- 2V
Output Swing	V_{OUT}	V	-2.44		2.34	< 10 ppm
			-2.4		2.27	< 5 ppm
Static Nonlinearity		ppm			5	V_{DD} = +5 V, Unity Gain
Common Mode Range	V_{CM}	V	-2.5			CMRR > 160dB
			2			CMRR > 53dB
Common Mode Rejection Ratio	CMRR	dB	160			f_{CM}= 10 Hz, V_{CM} = 0
Power Supply Rejection Ratio	PSRR	dB	178			f_{PS}= 1 Hz