

### DESCRIPTION

The Argo Semi AS0228 IP is a High Frequency rail to rail feed-forward compensated Operational Amplifier with high unity gain frequency above 10 GHz. AS0228 has a quiescent current ranging from 500uA to 6mA, depending on the bandwidth requirements. The opamp can be used in high cut-off frequency filters and high performance ADCs.

### FEAUTURES

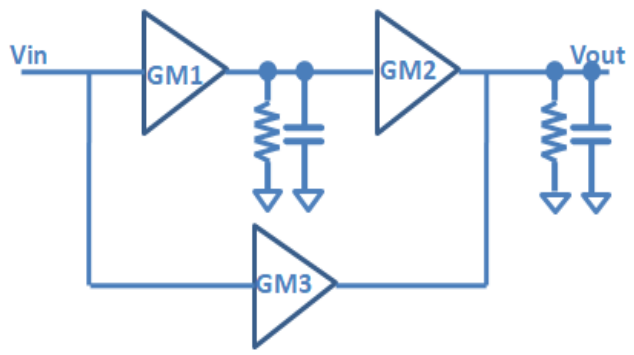
- ✓ Supply Voltage: 1V provided by LDO.  
-> LDO input 1.22V
- ✓ Unity gain frequency: >10GHz
- ✓ Rail to rail input
- ✓ DC gain: > 70 dB
- ✓ Input referred noise @20 MHz: 4.65uV/sqrt(Hz)
- ✓ Technology node: GF 22FDX CMOS SOI

### APPLICATIONS

- WiFi 6/6E/7
- Bluetooth
- 5G NR
- LTE

### ABOUT ARGO SEMICONDUCTORS

Argo Semiconductors offers high quality RF IP products operating in the frequency region between 2 GHz and 10 GHz. Argo’s team has a long experience on Wi-Fi RF silicon product development and cellular RF silicon product development, bringing billions of chips to the market. Leveraging on these capabilities and building on its solid IP base, Argo helps its customers develop products that can meet the most stringent requirements, while shrinking the development time. IP customization is possible upon request.



Simplified Block Diagram

High Frequency opamp Characteristics					
Parameter	Minimum	Typical	Maximum	Units	Comments
Operating temperature range	-40		125	°C	
unity gain frequency (ft)		10		GHz	
DC gain		70		dB	
input refered noise at 20 MHz		4.65u		V/sqrt(Hz)	
output linear range (diff)		540m		V	
Power consumption		2.5m	6m	A	at 6mA the ft is > 20 GHz
Area		0.06		mm <sup>2</sup>	