

AS0227

LDO 10/30/60/80 mA



DESCRIPTION

The Argo Semi AS0227 IP is a Low Dropout regulator (LDO) for general purpose applications. It operates from 1.8V and produces a programmable (50mV step) output voltage in the range of 0.8-0.95V or in the range of 1.1-1.45V. It does not require an external capacitor. The operating temperature range is -40°C to 125°C, and the DC quiescent current consumption is 300uA. The noise performance is better than -164 dBVrms/sqrt(Hz) @ 1MHz, while a PSRR better than 52dB @ 1MHz is achieved. It can drive loads from 10mA to 80mA.

FEAUTES

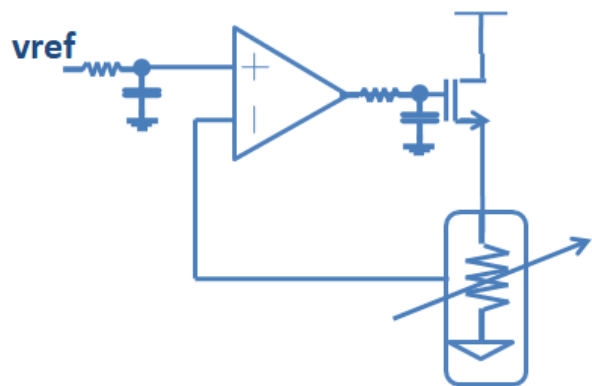
- ✓ VIN: 1.8V
- ✓ VOUT: 0.8-0.95V (step 50mV)
- ✓ :1.1-1.45V (step 50mV)
- ✓ External cap needed: NO
- ✓ Quiescent current: 300uA
- ✓ Phase margin (deg): 90 (30mA) , 74 (60mA)
- ✓ Output noise @1MHz: -164 dBVrms/sqrt(Hz) (30mA)
- ✓ : -166 dBVrms/sqrt(Hz) (80mA)
- ✓ PSRR @ 1MHz : 59 dB (30mA)
- ✓ : 52 dB(80mA)
- ✓ Technology node: GF 22FDX CMOS SOI

APPLICATIONS

- General Purpose Applications

ABOUT ARGO SEMICONDUCTORS

Argo Semiconductors offers high quality RF IP products operating in the frequency region between 2GHz and 10GHz. 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

LDO Characteristics					
Parameter	Minimum	Typical	Maximum	Units	Comments
Operating temperature range	-40		125	oC	
Vin		1.8			
Vout	0.8		0.95	V	max Iload 80mA
	1.1		1.45	V	max Iload 30mA
Vout step		50		mV	
External capacitor needed		NO			
Quiescent Current		300		uA	
Phase margin		74		deg	(Iload =80mA)
		90			(Iload =30mA)
Output Noise @ 1MHz		-166		dBVrms/sqrt(Hz)	(Iload =80mA)
		-164			(Iload =30mA)
PSRR		52		dB	(Iload =30mA)
		59		dB	(Iload =80mA)
Area		0.06		mm ²	