LDO ICs

Micro-power Consumption, 600mA, Low Input Voltage, High PSRR Low-Dropout Voltage Linear Regulator

AS9116

Pb Free — ANGSemi Microelectronics Components
RoHS — Directive Compliance

● General Description

The AS9116 is a CMOS low dropout, low noise, low power consumption, high PSRR, low quiescent current positive linear regulator with input voltage down to about 1.20V. The AS9116 can deliver a guaranteed 600mA load current with a low dropout voltage that optimized for battery-powered systems or portable wireless devices such as mobile phones. Quiescent current of only 1.5uA makes these devices ideal for powering the battery-powered, always-on systems that require very little idle-state power dissipation to a longer service life. There is an option of shutdown function by selecting the parts with the EN pin and pulling it low. The off state of AS9116 that consumes less than 0.1uA during shutdown mode.

The device is suitable for portable application such as cellular handsets or PDA. The AS9116 is designed and optimized to work with low cost ceramic capacitors 1.0uF, which consumes less than 0.1μA during shutdown mode. Besides, its current limit protection and on-chip thermal shutdown function provide protection against any combination of over-load or ambient temperature which could cause junction temperature exceeding maximum rating. The AS9116 includes a reference bypass pin in order to reduce output noise and a logic control shut-down input.

The space-saving tiny SOT23-3L, SOT23-5L and DFN1010-4L packages are attractive for hand-held applications. The device is specified over an ambient temperature range of -40°C to 125°C.
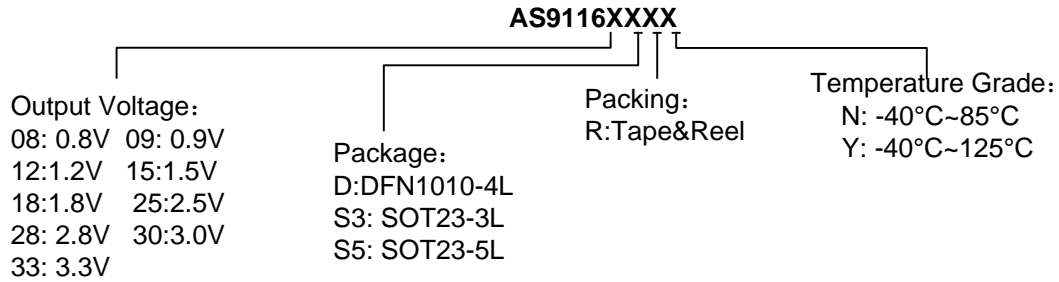
● Features

■ Output Current Up to 600mA
■ Low Voltage V_{IN} Range: 1.20V to 5.5V
■ Very Low Input Voltage at 1.20V (Min.)
■ Very Low Quiescent Current at 1.5uA
■ Low Dropout voltage of 350mV at 600mA
■ Output Voltage Accuracy at ±2.0%
■ PSRR 75dB at 1.0KHz
■ Needs Only 1.0uF Capacitor for Stability
■ Current Limit Protection
■ Current Fold-back Protection
■ 0.01uA Shutdown Current
■ Without EMI and Switch Noise
■ Low ESR Ceramic Capacitor for Output Stability
■ RoHS and Green Compliant
■ DFN1010-4L, SOT23-3L and SOT23-5L Packages
■ -40℃ to +125 ℃ Temperature Range

● Applications

■ Portable, Battery Powered Equipment
■ Low Power Microcontrollers
■ PDAs and Digital Camera
■ Wireless Communication Equipment
■ Mobil Handsets
■ Tablet PCs and Laptops/Netbooks
■ Camcorder Video Light (Movie Light)
■ Audio/Video Equipment

Ordering Information

AS9116XXXX

Output Voltage：
08: 0.8V   09: 0.9V
12:1.2V   15:1.5V
18:1.8V   25:2.5V
28: 2.8V   30:3.0V
33: 3.3V

Package：
D:DFN1010-4L
S3: SOT23-3L
S5: SOT23-5L

Packing：
R:Tape&Reel

Temperature Grade：
N: -40°C~85°C
Y: -40°C~125°C

Part Number	Driver Capability	Package Type	Package Qty	Temperature	Eco Plan
AS9116-XXDRN	600mA	DFN1010-4L	7-in reel 10000pcs/reel	-40～85℃	RoHS
AS9116-XXS3RN	600mA	SOT23-3L	7-in reel 3000pcs/reel	-40～85℃	RoHS
AS9116-XXS5RN	600mA	SOT23-5L	7-in reel 3000pcs/reel	-40～85℃	RoHS
AS9116-XXDRY	600mA	DFN1010-4L	7-in reel 10000pcs/reel	-40～125℃	RoHS
AS9116-XXS5RY	600mA	SOT23-5L	7-in reel 3000pcs/reel	-40～125℃	RoHS

Marking Information & Pin Assignment

DFN1010-4L
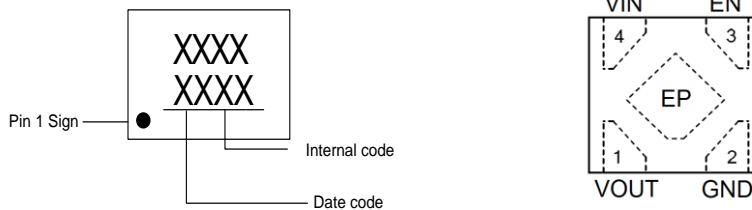
Pin Name	Pin No. DFN1010-4L	I/O	Pin Function
VOUT	1	O	Output Pin
GND	2	P	Ground
EN	3	I	Pull this pin high to enable IC, pull this pin low to shutdown IC.
VIN	4	P	Input Power Supply
EP	-	-	Please Connected to GND.

SOT23-5L
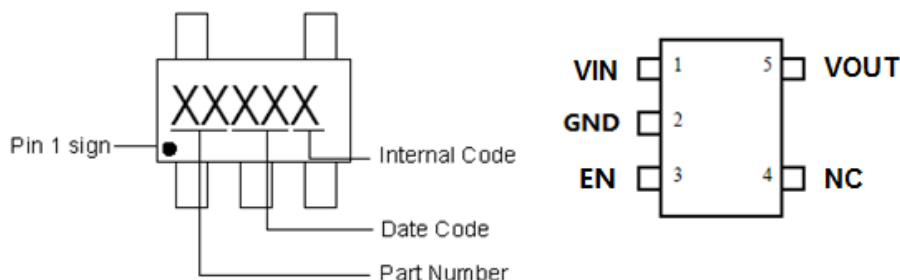
Pin Name	Pin No. SOT23-5L	I/O	Pin Function
VIN	1	P	Input Power Supply
GND	2	P	Ground
EN	3	I	Pull this pin high to enable IC, pull this pin low to shutdown IC.
NC	4	-	Not Connected.
VOUT	5	O	Output Pin

■ **Packing Information**
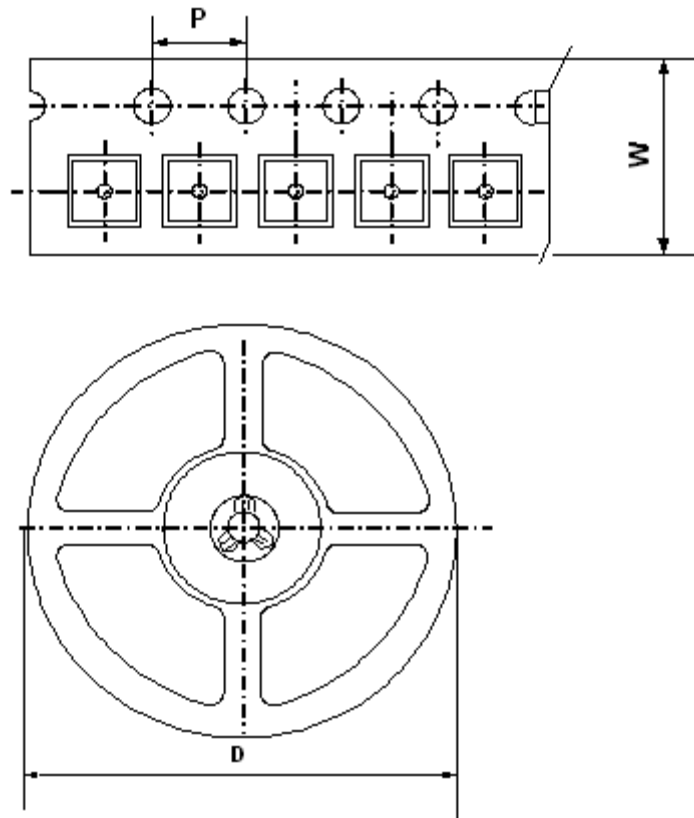
Package Type	Carrier Width(W)	Pitch(P)	Reel Size(D)	Packing Minimum
DFN1010-4L	8.0±0.1 mm	2.0±0.1 mm	180±1 mm	10000pcs
SOT23-5L	8.0±0.1 mm	4.0±0.1 mm	180±1 mm	3000pcs
SOT23-3L	8.0±0.1 mm	4.0±0.1 mm	180±1 mm	3000pcs

Note: Carrier Tape Dimension, Reel Size and Packing Minimum