

LDO ICs

# Micro-Power consumption, 250mA, Low Input Voltage, High PSRR, Low-Dropout Voltage Linear Regulator

**AS9112**

## ● General Description

The AS9112 is a CMOS low dropout, low noise, low power consumption, high PSRR, low quiescent current positive linear regulator with input voltage down to about 1.80V. The AS9112 can deliver a guaranteed 250mA 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 2.0uA 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 AS9112 that consumes less than 0.1uA during shutdown mode.

The device is suitable for portable application such as cellular handsets or PDA. The AS9112 is designed and optimized to work with low cost ceramic capacitors 1.0uF, which consumes less than 0.1uA 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 AS9112 includes a reference bypass pin in order to reduce output noise and a logic control shut-down input.

The space-saving tiny SOT23-5L and DFN2020-6L packages are attractive for hand-held applications. The device is specified over an ambient temperature range of -40°C to 125°C.

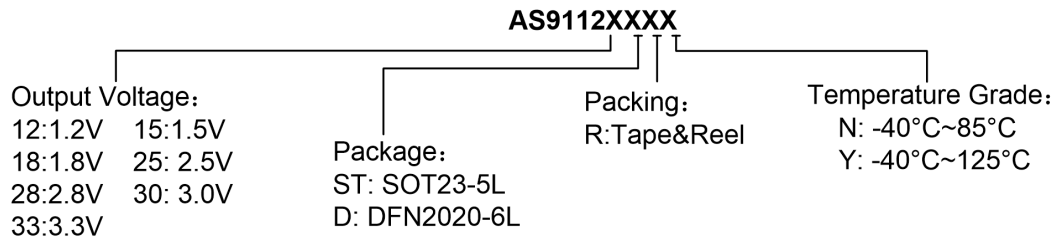
## ● Features

- Output Current Up to 250mA
- Low Voltage  $V_{IN}$  Range: 1.80V to 6.5V
- Very Low Input Voltage at 1.80V (Min.)
- Very Low Quiescent Current at 2.0uA
- Low Dropout voltage of 200mV at 250mA
- Output Voltage Accuracy at  $\pm 2.0\%$
- 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
- SOT23-5L and DFN2020-6L Packages
- -40°C to +125 °C 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

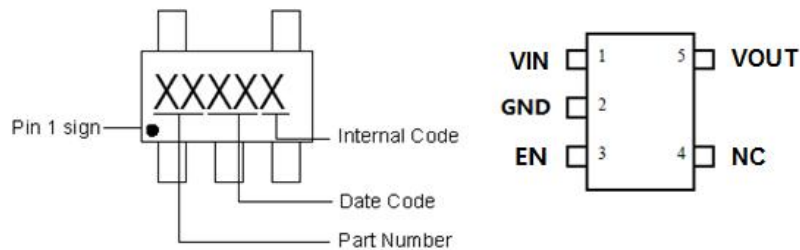
## ● Ordering Information



Part Number	Driver Capability	Package Type	Package Qty	Temperature	Eco Plan
AS9112-XXSTRN	250mA	SOT23-5L	7-in reel 3000pcs/reel	-40~85°C	RoHS
AS9112-XXDRN	250mA	DFN2020-6L	7-in reel 3000pcs/reel	-40~85°C	RoHS
AS9112-XXSTRY	250mA	SOT23-5L	7-in reel 3000pcs/reel	-40~125°C	RoHS
AS9112-XXDRY	250mA	DFN2020-6L	7-in reel 3000pcs/reel	-40~125°C	RoHS

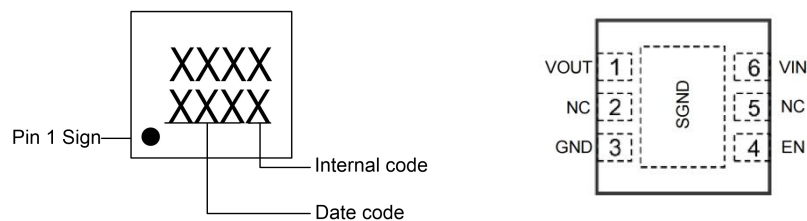
## ● Marking Information & Pin Assignment

### SOT23-5L



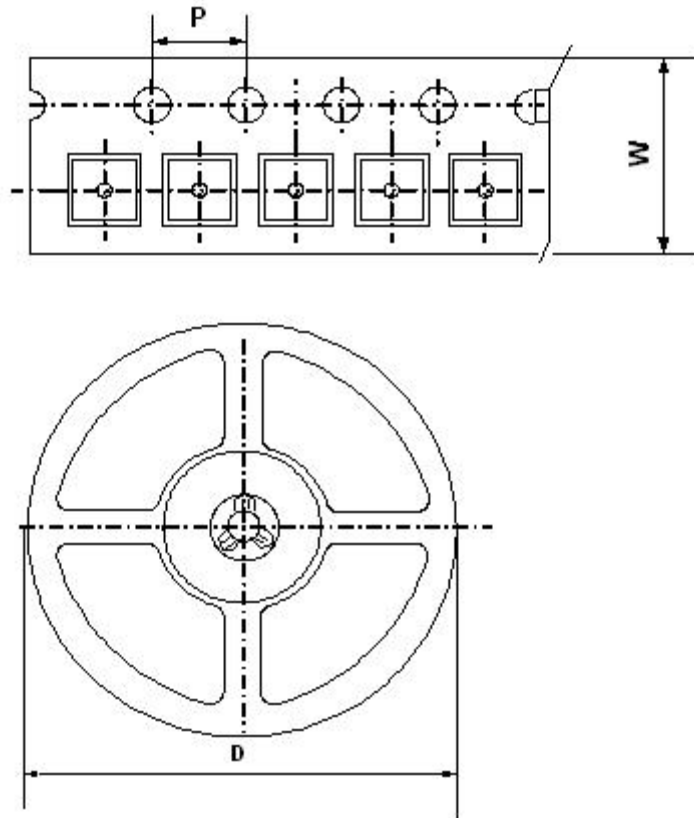
Pin Name	Pin No.	I/O	Pin Function
	SOT23-5L		
VIN	1	P	Input Power Supply
GND	2	P	Ground
EN	3	I	Pull this pin high to enable IC, pull this pin low to shutdown IC.
NC	4	-	Not Connected.
VOUT	5	O	Output Pin

### DFN2020-6L



Pin Name	Pin No.	I/O	Pin Function
	DFN2020-6L		
VOUT	1	O	Output Pin
NC	2, 5	-	Not Connected.
GND	3	P	Ground
EN	4	I	Pull this pin high to enable IC, pull this pin low to shutdown IC.
VIN	6	P	Input Power Supply

■ Packing Information



Package Type	Carrier Width(W)	Pitch(P)	Reel Size(D)	Packing Minimum
SOT23-5L	8.0±0.1 mm	4.0±0.1 mm	180±1 mm	3000pcs
DFN2020-6L	8.0±0.1 mm	2.0±0.1 mm	180±1 mm	3000pcs

Note: Carrier Tape Dimension, Reel Size and Packing Minimum