

LDO ICs

Micro-Power consumption 24V, 300mA, Low Low-Dropout Voltage Linear Regulator

**AS9123**

● General Description

The AS9123 is a CMOS low dropout, low noise, low power consumption, low quiescent current positive linear regulator with wide input voltage range. The AS9123 can deliver a guaranteed 300mA load current with a low dropout voltage. 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 AS9123 that consumes less than 0.1uA during shutdown mode.

The AS9123 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 space-saving tiny SOT23-3L, SOT23-5L and SOT89-3L packages are attractive for hand-held applications. The device is specified over an ambient temperature range of -40°C to 85°C.

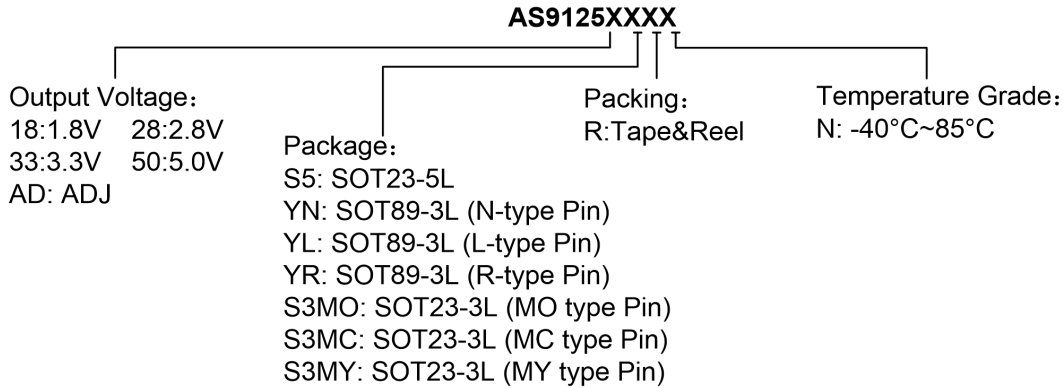
● Features

- Output Current Up to 300mA
- Wide Voltage V_{IN} Range: 2.0V to 24V
- Very Low Quiescent Current at 1.5uA
- Low Dropout voltage of 350mV at 100mA/ $V_{IN}=5V$
- Output Voltage Accuracy at $\pm 2.0\%$
- Support Fixed Output Voltage: 1.8V, 2.8V, 3.3V, 5V
- Support Adjustable Output Voltage
- PSRR 70dB at 100Hz
- Needs Only 1.0uF Capacitor for Stability
- Current Limit Protection
- Without EMI and Switch Noise
- Stable with Ceramic Capacitor or Tantalum Capacitor
- Over Temperature Protection
- RoHS and Green Compliant
- SOT23-3L, SOT89-3L and SOT23-5L Packages
- -40°C to +85 °C Temperature Range

● Applications

- Portable, Battery Powered Equipment
- Low Power Microcontrollers
- Laptop, Palmtops & PDAs
- Audio/Video Equipment
- Car Navigation Systems
- Industrial Control
- Weighting Scales
- Meters/Home Automation

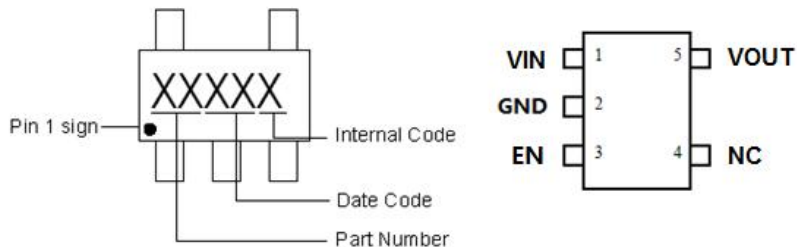
● Ordering Information



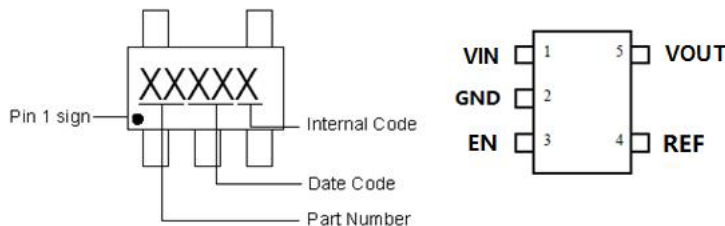
Part Number	Driver Capability	Package Type	Package Qty	Temperature	Eco Plan
AS9123-XXS5RN	300mA	SOT23-5L	7-in reel 3000pcs/reel	-40~85°C	RoHS
AS9123-ADS5RN	300mA	SOT23-5L	7-in reel 3000pcs/reel	-40~85°C	RoHS
AS9123-XXYNRN	300mA	SOT89-3L	7-in reel 1000pcs/reel	-40~85°C	RoHS
AS9123-XXYLRN	300mA	SOT89-3L	7-in reel 1000pcs/reel	-40~85°C	RoHS
AS9123-XXYRRN	300mA	SOT89-3L	7-in reel 1000pcs/reel	-40~85°C	RoHS
AS9123-XXS3MORN	300mA	SOT23-3L	7-in reel 3000pcs/reel	-40~85°C	RoHS
AS9123-XXS3MCRN	300mA	SOT23-3L	7-in reel 3000pcs/reel	-40~85°C	RoHS
AS9123-XXS3MYRN	300mA	SOT23-3L	7-in reel 3000pcs/reel	-40~85°C	RoHS

● Marking Information & Pin Assignment

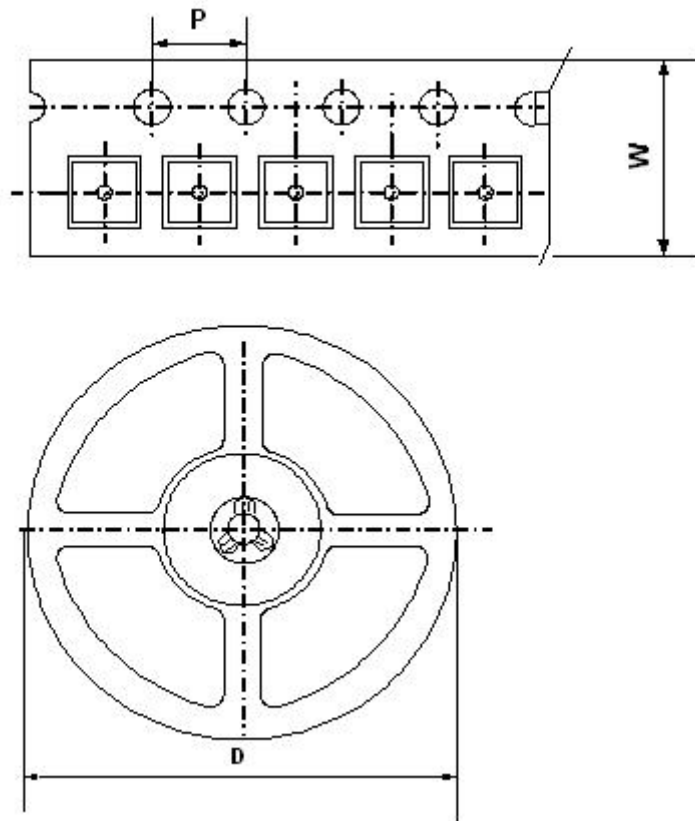
SOT23-5L (Fixed Output Voltage):



SOT23-5L (Adjustable Output Voltage):



Pin Name	Pin No.		I/O	Pin Function
	SOT23-5L (AS9123-XXS5RN)	SOT23-5L (AS9123-ADS5RN)		
VIN	1	1	P	Input Power Supply
GND	2	2	P	Ground
EN	3	3	I	Pull this pin high to enable IC, pull this pin low to shutdown IC.
NC	4	-	-	Not Connected.
REF	-	4	I	Reference Voltage pin of the Output voltage.
VOUT	5	5	O	Output Pin

■ 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
SOT23-3L	8.0±0.1 mm	4.0±0.1 mm	180±1 mm	3000pcs
SOT89-3L	8.0±0.1 mm	4.0±0.1 mm	180±1 mm	1000pcs

Note: Carrier Tape Dimension, Reel Size and Packing Minimum