

AS1920, AS1922

Triple-Voltage, Micro-Power Microprocessor Supervisory Circuits

1 General Description

The AS1920 and AS1922 microprocessor supervisory circuits were designed to generate a reset when at least one of the three monitored supply voltages falls below its respective trip threshold.

These very-low-current (6.5µA, typ) devices maintain reset for a minimum timeout period after all supplies have stabilized. Guaranteed to be in the correct state for $V_{CC} > +1.0V$, these devices are perfect for multiple-voltage systems with low current requirements and strict monitoring requirements.

The devices are available as the standard products listed in [Table 1](#).

Table 1. Standard Products

Model	Output Type	Supervisory Voltages
AS1920-18	Push/Pull	3V, 1.8V, Adjustable
AS1922-18	Open-Drain	3V, 1.8V, Adjustable

All devices monitor primary and secondary factory-trimmed voltages. Additionally, a third monitoring voltage can be selected via an external resistor divider.

The AS1920 has an active-low push/pull reset output, whereas the AS1922 has an active-low open-drain reset output.

The AS1920 and AS1922 are available in a 5-pin SOT23 package.

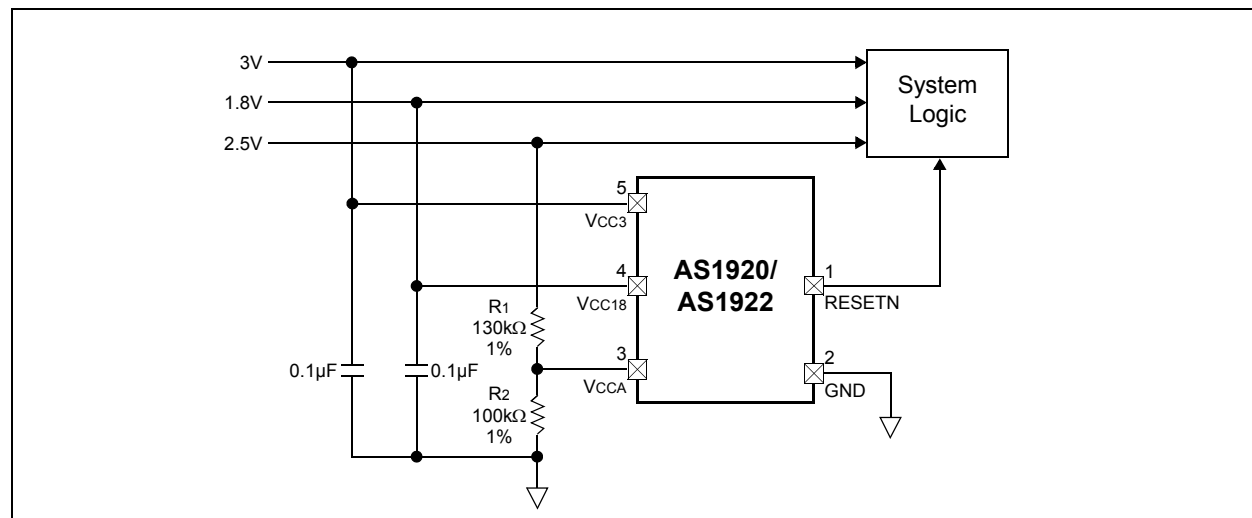
2 Key Features

- Simultaneous Triple-Voltage Monitoring
- Very-Low Supply Current: 6.5µA
- ±1.5% Accuracy Over Temperature
- Reset Time Delay: 200ms
- Power Supply Transient Immunity
- Guaranteed Reset for $V_{CC3} \geq 1V$ or $V_{CC18} \geq 1V$
- Active-Low Push/Pull Reset Output (AS1920)
- Active-Low Open-Drain Reset Output (AS1922)
- 5-pin SOT23 Package

3 Applications

The devices are ideal for personal computers, notebooks, battery-powered systems, embedded controllers, intelligent instruments, automotive systems, critical CPU monitoring, and any multi-supply monitoring application.

Figure 1. Typical Application Diagram



Copyrights

Copyright © 1997-2006, austriamicrosystems AG, Schloss Premstaetten, 8141 Unterpemstaetten, Austria-Europe. Trademarks Registered ®. All rights reserved. The material herein may not be reproduced, adapted, merged, translated, stored, or used without the prior written consent of the copyright owner.

All products and companies mentioned are trademarks or registered trademarks of their respective companies.

Disclaimer

Devices sold by austriamicrosystems AG are covered by the warranty and patent indemnification provisions appearing in its Term of Sale. austriamicrosystems AG makes no warranty, express, statutory, implied, or by description regarding the information set forth herein or regarding the freedom of the described devices from patent infringement. austriamicrosystems AG reserves the right to change specifications and prices at any time and without notice. Therefore, prior to designing this product into a system, it is necessary to check with austriamicrosystems AG for current information. This product is intended for use in normal commercial applications. Applications requiring extended temperature range, unusual environmental requirements, or high reliability applications, such as military, medical life-support or life-sustaining equipment are specifically not recommended without additional processing by austriamicrosystems AG for each application. For shipments of less than 100 parts the manufacturing flow might show deviations from the standard production flow, such as test flow or test location.

The information furnished here by austriamicrosystems AG is believed to be correct and accurate. However, austriamicrosystems AG shall not be liable to recipient or any third party for any damages, including but not limited to personal injury, property damage, loss of profits, loss of use, interruption of business or indirect, special, incidental or consequential damages, of any kind, in connection with or arising out of the furnishing, performance or use of the technical data herein. No obligation or liability to recipient or any third party shall arise or flow out of austriamicrosystems AG rendering of technical or other services.

Contact Information

Headquarters

austriamicrosystems AG
A-8141 Schloss Premstaetten, Austria

Tel: +43 (0) 3136 500 0

Fax: +43 (0) 3136 525 01

e-mail: info@austriamicrosystems.com

For Sales Offices, Distributors and Representatives, please visit:

<http://www.austriamicrosystems.com>

austriamicrosystems – a leap ahead