

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.

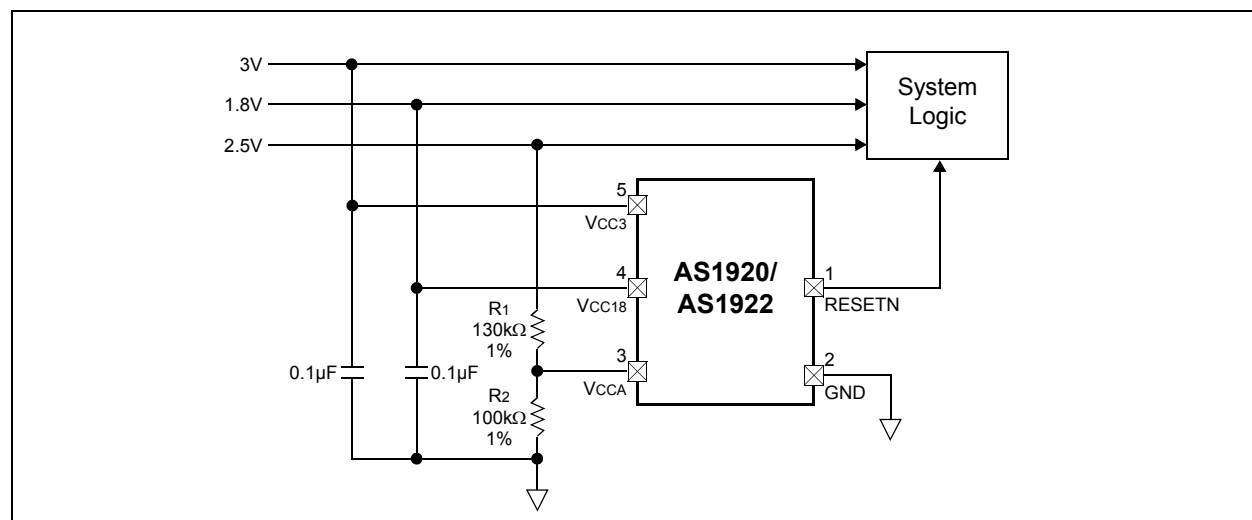
2 Key Features

- 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



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