

AS1976, AS1977

Ultra-Low Current, 1.8V Comparators

1 General Description

The AS1976/AS1977 are very low-current comparators that can operate beyond the rail voltages and are guaranteed to operate down to 1.8V

Low input bias current, current-limiting output circuitry, and ultra-small packaging make these comparators ideal for low-power 2-cell applications including power-management and power-monitoring systems.

The comparators are available as the standard products listed in Table 1.

Table 1. Standard Products

Model	Output Type	Current
AS1976	Push/Pull	200nA
AS1977	Open-Drain	200nA

The AS1976 push/pull output can sink or source current.

The AS1977 open-drain output can be pulled beyond V_{CC} to a maximum of 3.6V > V_{EE}. This open-drain model is ideal for use as a logic-level translator or bipolar-to-unipolar converter.

Large internal output drivers provide rail-to-rail output swings with loads up to 8mA. Both devices feature built-in battery power-management and power-monitoring circuitry.

The AS1976/AS1977 are available in a 5-pin SOT23 package.

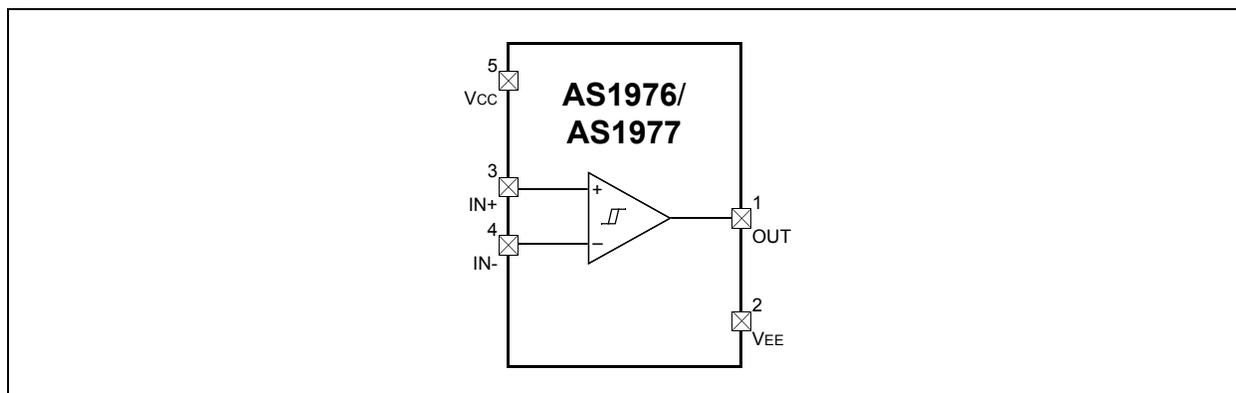
2 Key Features

- CMOS Push/Pull Output Sinks and Sources 8mA (AS1976)
- CMOS Open-Drain Output Voltage Extends Beyond V_{CC} (AS1977)
- Ultra-Low Supply Current: 200nA
- Internal Hysteresis: 3mV
- Guaranteed to Operate Down to +1.8V
- Input Voltage Range Operates 200mV Beyond the Rails
- Crowbar Current-Free Switching
- No Phase Reversal for Overdriven Inputs
- 5-pin SOT23 Package

3 Applications

The devices are ideal for battery monitoring/management, mobile communication devices, laptops and PDAs, ultra-low-power systems, threshold detectors/discriminators, telemetry and remote systems, medical instruments, or any other space-limited application with low power-consumption requirements.

Figure 1. Block Diagram



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