The AZV5002 is a low power and cost-effective headset detection IC. It includes a comparator with built-in hysteresis, OR gate, and a dedicated N-channel MOSFET switch that drives the MIC control input of audio codecs when a headset with a microphone jack is inserted.

Minimal external components are required (all pull-up resistors for the detection pins and resistors for the left audio channel detection potential divider reference voltage are internalized).

The logic low output of the OR gate indicates the headset has been connected properly.

The AZV5002 is available in miniaturized U-QFN1418-10 package, reducing the space needed on PCB boards.

The Diodes Advantage

- Comparator, OR Gate, N-Channel MOSFET Integrated
  Helps to reduce audio insertion pop noise
- Low Supply Current: 5µA (typical) @ VCC = 1.8V
  Reduces system power consumption
- Low Voltage Operation (down to 1.6V)
  Suitable for systems with low voltage operation
- Miniaturized Package without Extra External Components
  Reduces the PCB board space required

Applications

- Mobile phones
- Tablets
- Battery powered devices
- Alarm and security systems
System Functional Block Diagram

Product Portfolio

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Minimum Supply Voltage (V)</th>
<th>Maximum Supply Voltage (V)</th>
<th>Supply Current @ VCC=5V (µA)</th>
<th>Input Offset Voltage (V)</th>
<th>Input Bias Current (nA)</th>
<th>Input Common Mode Voltage (V)</th>
<th>Output Current Sink (mA)</th>
<th>Number of Channels</th>
<th>Operating Ambient Temperature Range, Ta (°C)</th>
<th>Output Type</th>
<th>Package Outline</th>
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<tbody>
<tr>
<td>AZV5002DS-7</td>
<td>1.6</td>
<td>5.5</td>
<td>7.5</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>2</td>
<td>-40 ~ +85</td>
<td>Open-Drain</td>
<td>UQFN1418-10</td>
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Ordering Information

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<thead>
<tr>
<th>Part Number</th>
<th>Package Code</th>
<th>Packaging</th>
<th>Quantity</th>
<th>7” Tape and Reel</th>
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<tbody>
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<td>DS</td>
<td>U-QFN1418-10</td>
<td>3,000/Tape &amp; Reel</td>
<td>-7</td>
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