The PI3A6386 is an analog switch array, designed for USB Type-C™ D+/D- switching (USB signal in data mode) and analog audio signal in audio accessory mode.

The PI3A6386 includes a dual, single-pole double-throw (SPDT) switch for high-speed USB signal and high-quality audio signal. The audio path with negative signal handling capability has a very low THD of -110dB for high quality audio requirement. It also has a programmable soft-start/soft-stop feature to eliminate the click/pop sounds of DC-coupled audio signals. The data path has a high USB bandwidth of 1GHz for USB high-speed (480Mbps) signals.

PI3A6386 can also detect the microphone signals in SBU1 and SBU2 and automatically route them to the correct inputs of the microphone amplifier.

USB Type-C is a trademark of USB Implementers Forum.

The Diodes Advantage

- **Low Operation Power Supply Voltage from 1.8V to 5V**
  Supports a new generation of low power supply microprocessor and microcontroller platforms

- **Negative Signal (±3V) Handling Capability with Ultra-Low THD and Crosstalk Rejection/Off Isolation on Each Audio/Data Channel**
  Supports high-quality audio and high-speed data rate requirement

- **Separate Ground Switches for Microphone and Audio**
  Minimizes crosstalk

- **Programmable Soft-Start and Soft-Stop Time**
  Eliminates click/pop sounds of DC-coupled audio signals

- **Full I2C Control**
  Removes requirement for external input control from microprocessor

Applications

- Mobile Phone/Tablet/Notebook Applications
Typical Application Circuit

Product Portfolio

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Min. Input Voltage</th>
<th>Max. Input Voltage</th>
<th>Analog Signal Range</th>
<th>RON (ADR/ADL)</th>
<th>THD+N (ADR/ADL)</th>
<th>Crosstalk @ 30KHz</th>
<th>Temperature Range</th>
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<tbody>
<tr>
<td>PI3A6386ZLE</td>
<td>1.8V</td>
<td>5V</td>
<td>-3V ~ +3V</td>
<td>0.2Ω</td>
<td>-110dB</td>
<td>-85dB</td>
<td>-40°C to +85°C</td>
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Ordering Information

<table>
<thead>
<tr>
<th>Part Numbers</th>
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<th>Package</th>
<th>Reel Size</th>
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<tr>
<td>PI3A6386ZLEX</td>
<td>ZL</td>
<td>TQFN-24</td>
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