

USB Type-C Ultra-Low THD Analog Audio Switch

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.



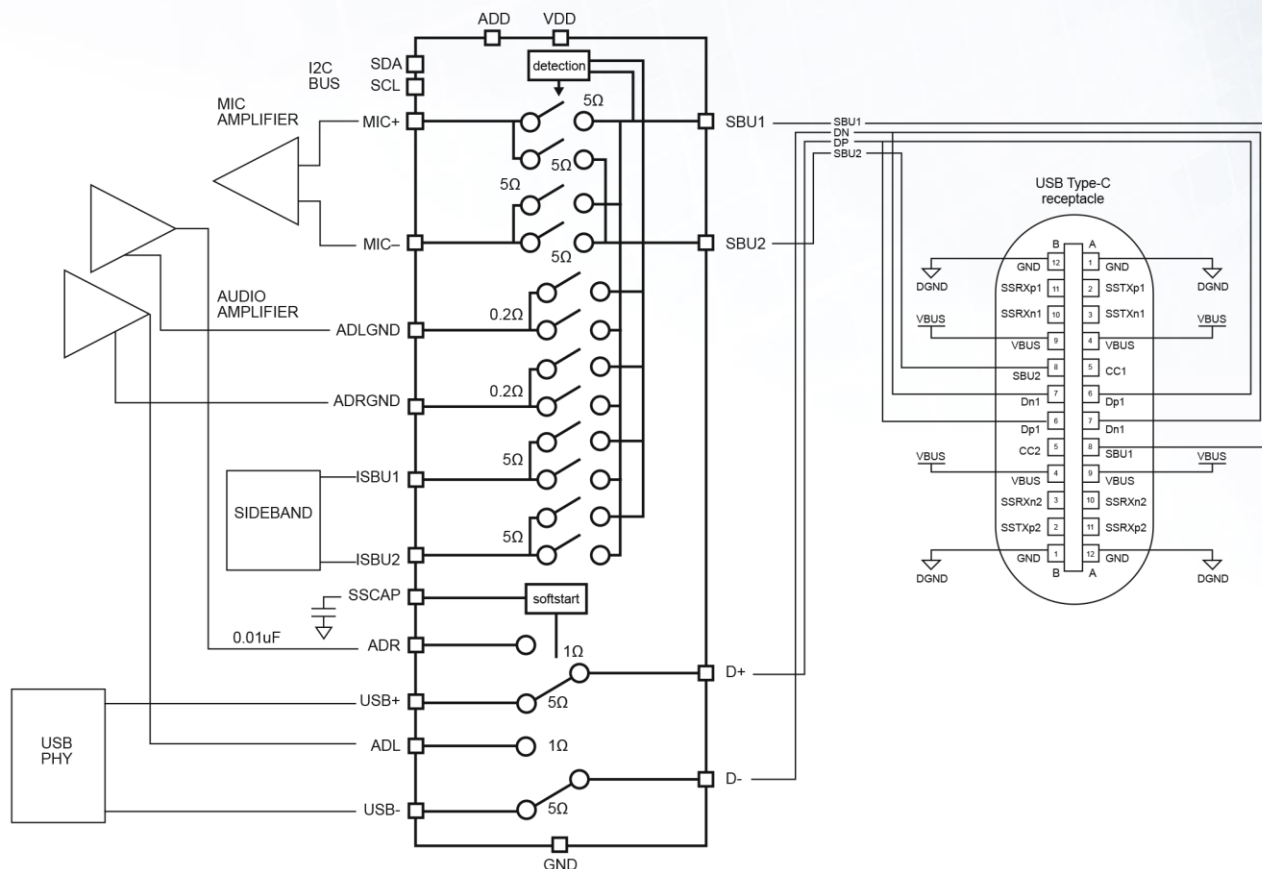
The Diodes Advantage

- **Low Operation Power Supply Voltage from 1.8V to 5V**
Supports a new generation of low power supply microprocessor and microcontroller platforms
- **Negative Signal ($\pm 3V$) 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

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

Ordering Information

Part Numbers	Package Code	Package	Reel Size	Units per Reel
PI3A6386ZLEX	ZL	TQFN-24	13"	3500