



T7507 Quad PCM Codec with Filters, Termination Impedance, and Hybrid Balance

Features

- +5 V only
- Low-power, latch-up-free CMOS technology
 - 37 mW/channel typical operating power dissipation
 - 1 mW/channel typical powerdown dissipation
- Fixed master clock frequency: 2.048 MHz
- On-chip sample and hold, autozero, and precision voltage reference
- Differential architecture for high noise immunity and power supply rejection
- Fully flexible time-slotted PCM interface
 - Fixed 2.048 MHz data rate
 - Delayed and nondelayed PCM modes
 - Fully flexible time-slot assignment
 - Transmit-receive aligned or offset
- Transmit PCM data output enabled flag
- Serial control interface with controlling processor
- Latched parallel control interface with SLIC and switch
- Meets or exceeds D3/D4 (as per Lucent Technologies PUB43801) and ITU-T G.711—G.714 requirements
- Operating temperature range: -40 °C to +85 °C
- A-law companding
- Hybrid balance and termination impedance
 - 200 Ω in series with 680 Ω || 0.1 μ F (People's Republic of China ZT)
 - Matched with L8567 SLIC
- Programmable receive gain (-3.5 dB or -7 dB), fixed transmit gain (0 dB) when matched with L8567 SLIC
- 44-pin PLCC

Description

The T7507 device is a single-chip, four-channel A-law PCM codec with filters. This integrated circuit provides analog-to-digital and digital-to-analog conversion. It provides the transmit and receive filtering necessary to interface a voice telephone circuit to a time-division multiplexed system. This device is packaged in a 44-pin PLCC.

This codec is intended for use with the Lucent Technologies Microelectronics Group SLIC 8567. When used with that SLIC, the line Tip-Ring pair will be terminated in the network required for central office applications in the People's Republic of China (PRC). Proper hybrid balance and transmit and receive gains will also be obtained.

This device uses a serial data control scheme to interface with the controlling processor. This device has a latched parallel data control scheme to provide control bits to and receive status bits from the SLIC and switch. This interface is designed to be compatible with the Lucent L8567 SLIC and L7583 solid-state switch.

