

LXT312 / LXT315

Low Power T1 PCM Repeaters / Transceivers

General Description

The LXT312 and LXT315 are integrated repeater/transceiver circuits for T1 carrier systems. The LXT312 is a dual repeater/transceiver and the LXT315 is a single repeater/transceiver. The LXT312 and LXT315 are designed to operate as regenerative repeaters/transceivers for 1.544 Mbps data rate PCM lines. Each includes all circuits required for a regenerative repeater/transceiver system including the equalization network, automatic line build-out (ALBO), and a state-of-the-art analog/digital clock extraction network tuned by an external crystal.

The key feature of the LXT312 family is that it requires only a crystal and a minimum of other components to complete a repeater/transceiver design. Compared with traditional tuned coil-type repeaters/transceivers, they offer significant savings in component and labor costs, along with reduced voltage drop/power consumption, and improved reliability. To ensure performance for all loop lengths, the LXT312 and LXT315 are 100% AC/DC tested using inputs generated by Level One's proprietary transmission line and network simulator.

The LXT312 and LXT315 are advanced CMOS devices which require only a single 5-volt power supply.

Features

- Integrated repeater/transceiver circuit on a single CMOS chip
- On-chip equalization network
- On-chip ALBO
- Low power consumption
- No tuning coil
- On-chip Loopback
- Recovered Clock Output
- 0 to 36 dB dynamic range
- -11 dB interference margin
- Compatible with CB113/TA24 specifications
- Single 5 V only CMOS technology
- Available in 16-pin PDIP and 44-pin PLCC

LXT312 / LXT315 Block Diagram

