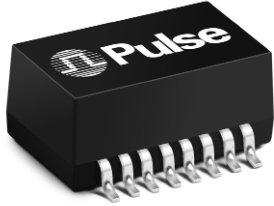


SONET/SDH

Dual Line Interface Transformers for E4/STM-1 Applications



- ☑ Compliant with ITU-T/G.703
- ☑ Supports 139.264 (E4) and 155.52 (STM-1) Mbps for Coded Mark Inversion (CMI) interfaces
- ☑ Designed to interface with AMCC's chip sets S3015/S3016 and S3031B for use with 75 Ω coaxial cable
- ☑ Dual design supports transmit and receive circuitry or PHY chip transmit cable and monitor outputs
- ☑ Fast rise time and low signal distortion

Electrical Specifications @ 25°C — Operating Temperature -40°C to +85°C

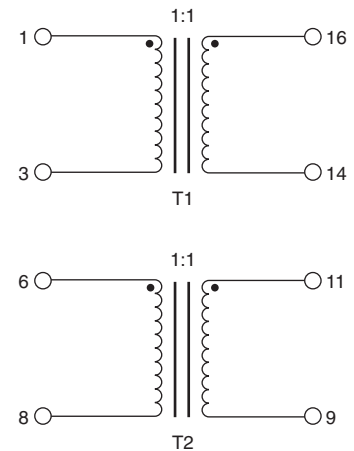
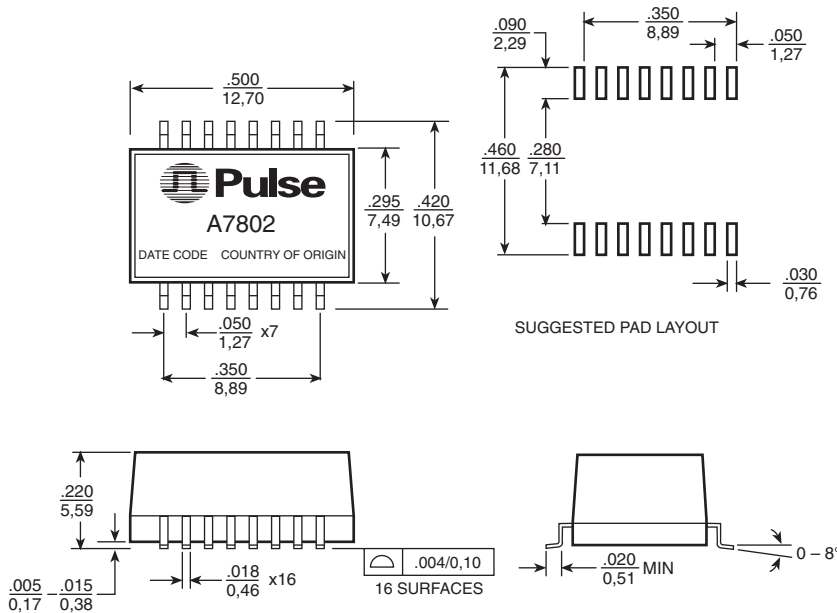
Part Number	Turns Ratio (±5%)	Primary Inductance OCL (μH MIN) @ 20m Vrms, 100 kHz	Leakage Inductance L_L (nH MAX)	Interwinding Capacitance C_{ww} (pF MAX)	DC Resistance DCR (Ω MAX)	Hipot (Vrms MIN)
A7802	1 : 1	42.0	100	6.0	.25	1500

Note: Modules are packaged in tubes unless Tape & Reel packaging is specified. Add the suffix "T" (such as A7802T) for Tape & Reel orders. Tape & Reel parts can only be ordered in multiples of 500 pieces.

Mechanical

Schematic

A7802



Dimensions: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are $\pm \frac{.010}{0.25}$

Weight 1.4 grams (max)

Tape & Reel 500/reel

Tube 45/tube

SONET/SDH

Dual Line Interface Transformers for E4/STM-1 Applications



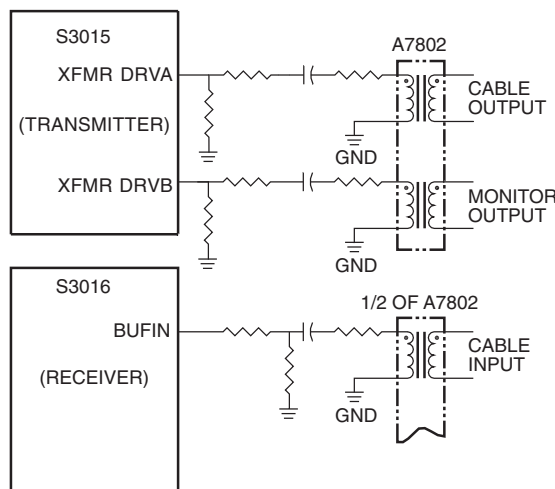
Application Notes:

Pulse has designed the **A7802**, SONET/SDH dual line interface transformer specifically for high-speed, STM-1/E4 serial data interfaces utilizing 75 Ω coaxial cable. The isolation transformer protects the station from static charges that may develop on the cable and prevents ground loop currents from being transferred between stations. The device has also been designed to provide inherent common rejection within the transmission Pass Band and thus reduce EMI. The high bandwidth of this transformer minimizes data dependent jitter (DDJ) by providing fast signal rise times with minimal signal distortion. Insertion Loss is typically less than -3 dB within .20 - 330 MHz Pass Band and

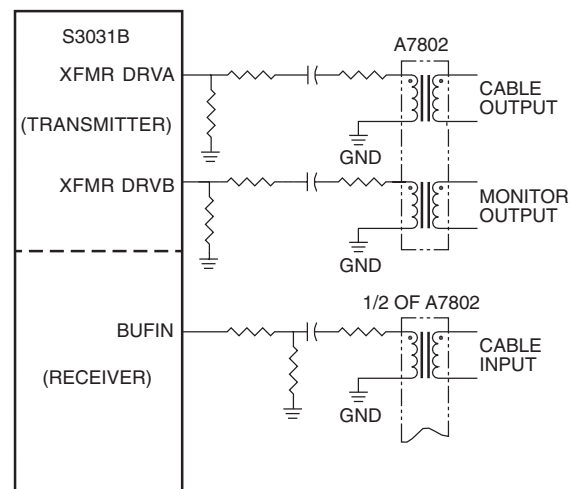
Return Loss is typically greater than -17 dB with 75 Ω load (can be affected by circuit board layout and other external electrical parasitics). With traditional coaxial links, the transformer also provides a balanced (differential) to single-ended connection between the transmitter/receiver IC and the coax.

The dual package allows connections of both transmit and receive channels or dual transmit (cable output and monitor output) channels as shown in the Application Circuits below. The auto-insertable, SMD packaging allows for a cost-effective solution for the application.

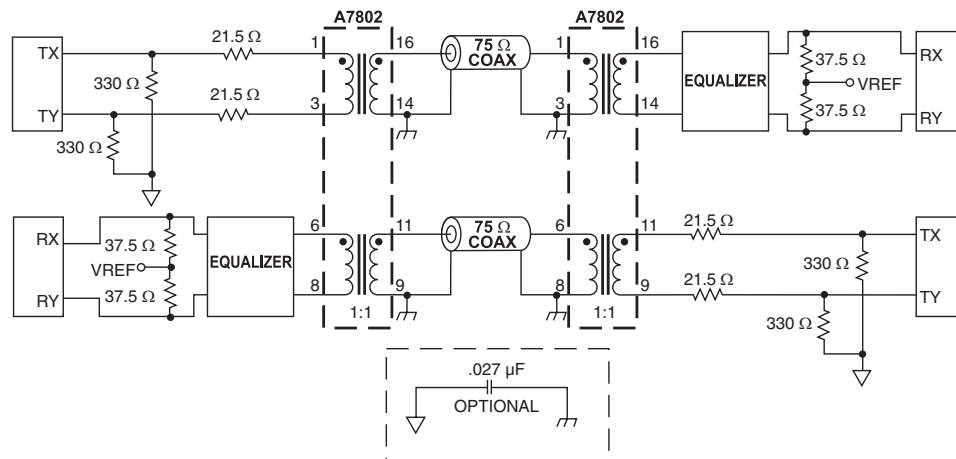
Application Circuits:



AMCC S3015/S3016 TRANSFORMER INPUT AND OUTPUT APPLICATION



AMCC S3031B TRANSFORMER INPUT AND OUTPUT APPLICATION



TYPICAL APPLICATION CIRCUIT OF TRADITIONAL COAXIAL LINK PROVIDING BALANCED (DIFFERENTIAL) TO SINGLE-ENDED CONNECTION

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