

# TRANSFORMERS FOR DIGITAL AUDIO DATA TRANSMISSION

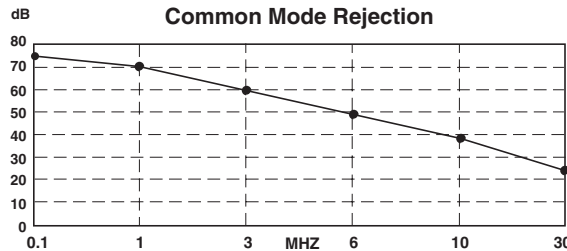
For Use with Cirrus Logic's CS8401, CS8402, CS8403 & CS8404 ICs



- Operating transmission rates: 1 to 7 Mbps
- Controlled rise time: 25 nsec MAX
- High isolation voltage: 2 kV MIN

## Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

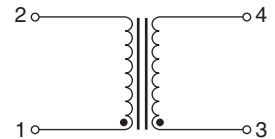
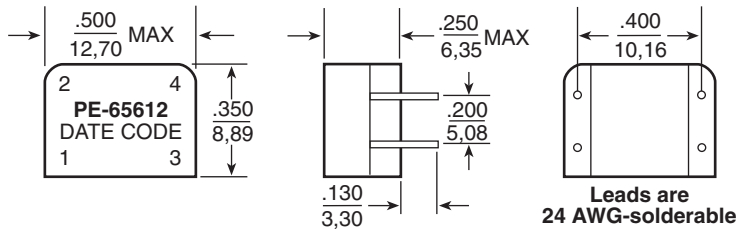
Part Number	Turns Ratio	Primary Inductance (mH ±20%)	L <sub>L</sub> (μH) MAX	Rise Time (nsec) MAX	ET (V-μsec) MAX	Isolation (Vrms) MIN	Bandwidth (100 KHz- 55 MHz) TYP	Return Loss (100 kHz-10MHz) MIN	Schematic
PE-65612	1:1 (±5%)	2.5	.50	25	20	2000	3 dB	20 dB	THT
PE-65812	1:1 (±5%)	2.5	.50	25	20	2000	3 dB	20 dB	SMT



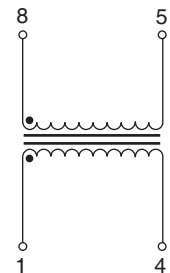
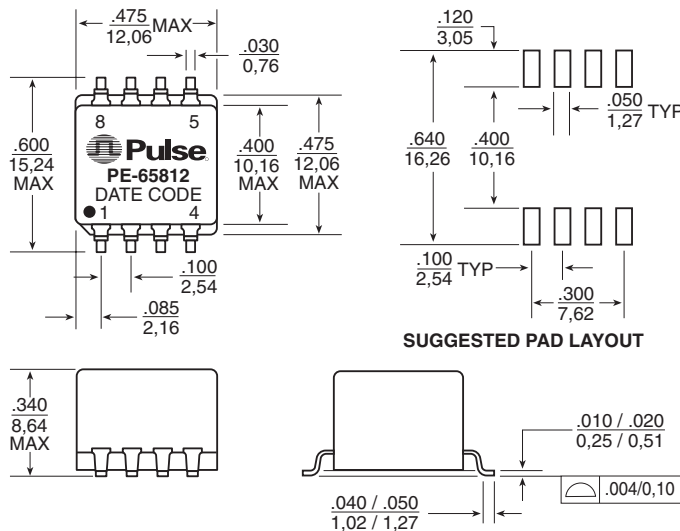
## Mechanicals

## Schematics

### PE-65612



### PE-65812



	PE-65612	PE-65812
Weight	. . . . . 1.2 grams	. . . . . 2.0 grams
Tape & Reel	. . . . . .NA	. . . . . .250/reel
Tube	. . . . . .60/tube	. . . . . .30/tube
Dimensions:	Inches / mm	
Unless otherwise specified all tolerances are ±.010 / 0,25		

# TRANSFORMERS FOR DIGITAL AUDIO DATA TRANSMISSION

## For Use with Cirrus Logic's CS8401, CS8402, CS8403 & CS8404 ICs



### Application

These transformers have been designed for use at the interface between line driver and receiver and the interconnecting medium in Digital Audio Data Transmission Systems according to AES 3-199X or IEC 958. In such systems, two channels of periodically sampled and uniformly quantized audio signals are transmitted on a single shielded twisted pair.

The electrical parameters of the interface are based on those of CCITT V.II or balanced voltage digital circuits which allow signal transmission up to a few hundred meters.

The isolation transformers are essential in improving the balance of the transmitter and the receiver circuitry, and reducing common mode noise and EMI.

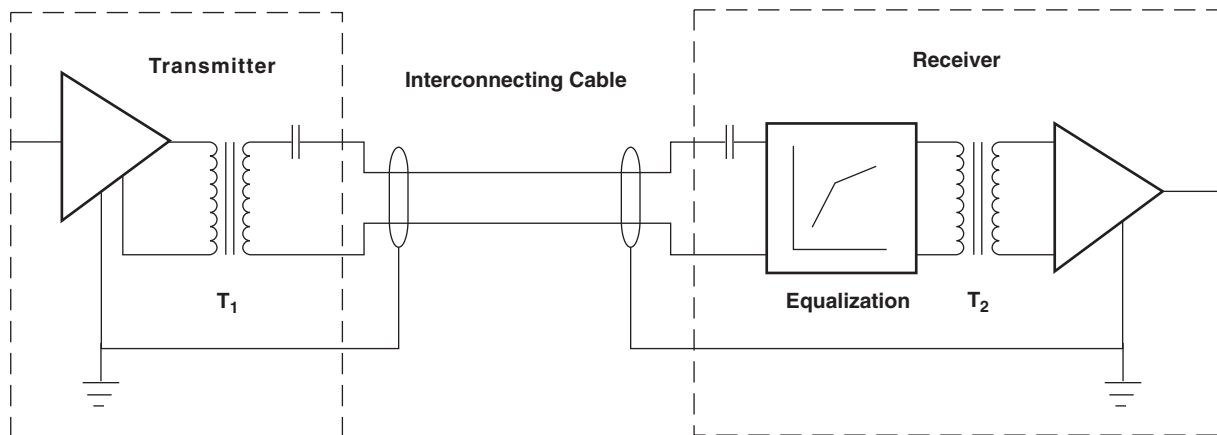
These transformers are recommended for use with the Cirrus Logic CS8401, CS8402, CS8403 and CS8404 "Digital Audio Interface Transmit Device."

The schematic below represents an implementation of transmit and receive circuits using isolation transformers at both ends. Equalization in the receiver may permit to increase the length of the interconnecting cable.

### Applicable Documents

AES 3-1985 (ANSI S4.40-1985), AES 3-199XDraft, IEC 958, CP-340, EBU 3250

### Application Circuit



T<sub>1</sub>, T<sub>2</sub>: PE-65612 or PE-65812

### For More Information :

UNITED STATES (Worldwide)	UNITED KINGDOM (Northern Europe)	FRANCE (Southern Europe)	SINGAPORE (Southern Asia)	TAIWAN, R.O.C. (Northern Asia)	HONG KONG (China/Hong Kong)	DISTRIBUTOR
12220 World Trade Drive San Diego, CA 92128 U.S.A. <a href="http://www.pulseeng.com">http://www.pulseeng.com</a> TEL: 858 674 8100 FAX: 858 674 8262	1 & 2 Huxley Road The Surrey Research Park Guildford, Surrey GU2 5RE United Kingdom TEL: 44 1483 401700 FAX: 44 1483 401701	Zone Industrielle F-39270 Orgelet France TEL: 33 3 84 35 04 04 FAX: 33 3 84 25 46 41	150 Kampong Ampat #07-01/02 KA Centre Singapore 368324 TEL: 65 287 8998 FAX: 65 280 0080	3F-4, No. 81, Sec. 1 HsinTai Wu Road Hsi-Chih, Taipei Hsien Taiwan, R.O.C. Tel: 886 2 2698 0228 FAX: 886 2 2698 0948	19/F, China United Plaza 1008 Tai Nan West Street Cheung Sha Wan, Kowloon Hong Kong, China TEL: 852 2788 6588 FAX: 852 2776 1055	

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be products and/or registered trademarks of their respective owners.