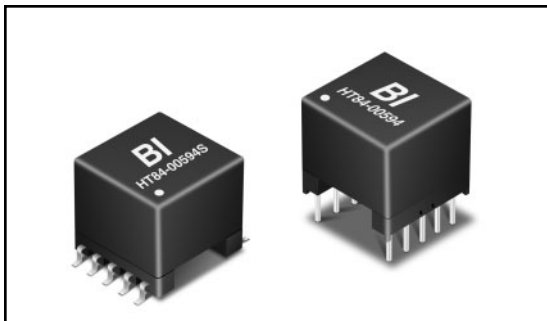


# MODEL HT84 SERIES

## ADSL Coupling Transformers

NEW PRODUCT



### FEATURES AND BENEFITS

- Supports industry standard ADSL/ADSL Lite transceivers
- Excellent total harmonic distortion characteristics
- Meets standard dielectric withstanding voltage requirements
- Conforms to ANSI, ITU and ETSI standards
- Operating temperature range of -40°C to +85°C
- Can be customized to meet unique specifications

### APPLICATIONS

- Designed for line rates up to 8 Mb/s applications
- Designs available for multiple data rates
- ADSL coupling transformer

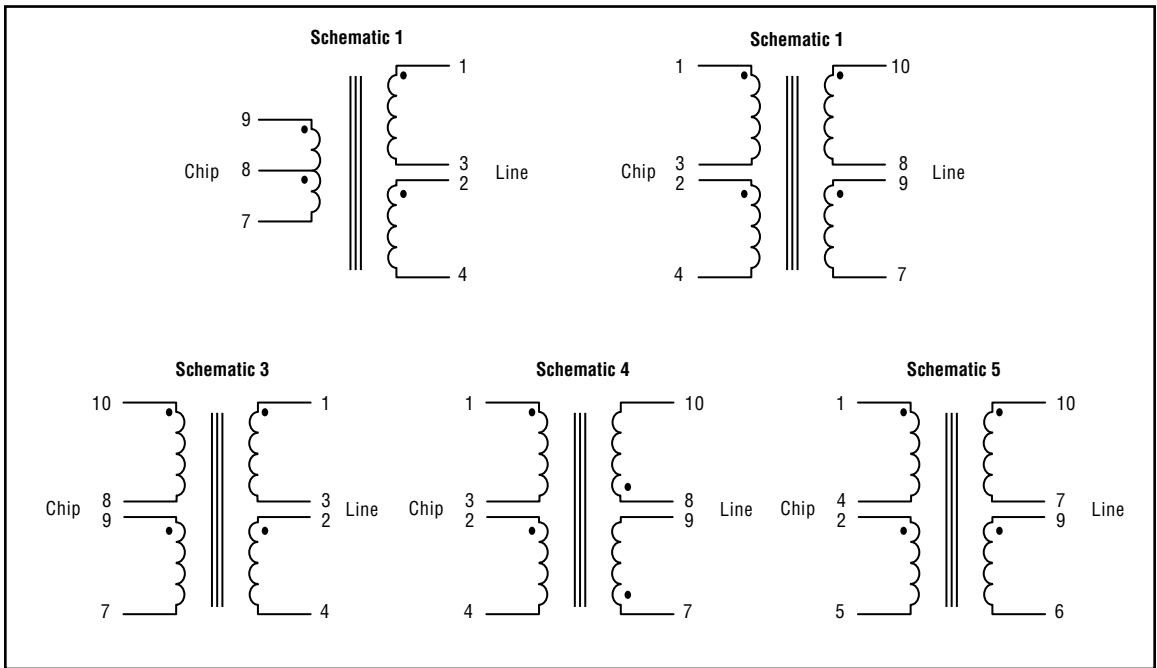
Specifications subject to change without notice.  
Last Update: 01/08/2003.

**ELECTRICAL @ 25°C**

| Part Number                | Application | Turns Ratio<br>Chip-Line | Open Circuit<br>Inductance<br>Chip Side <sup>(11)</sup><br>± 10% | Return<br>Loss<br>@ Mid Band<br>dB Min. | Insertion<br>Loss<br>dB Max. | Longitudinal<br>Balance <sup>(13)</sup><br>dB Min. | THD<br>dB Max.      | Fig.   | Sch. |
|----------------------------|-------------|--------------------------|------------------------------------------------------------------|-----------------------------------------|------------------------------|----------------------------------------------------|---------------------|--------|------|
| HT84-00594 <sup>(1)</sup>  | COE         | 1:1:2:2                  | 110µH                                                            | 16<br>.2-2 MHz                          | 3.0<br>.4-2MHz               | 40<br>.25-1.1MHz                                   | -75 <sup>(12)</sup> | 2 or 3 | 3    |
| HT84-00595 <sup>(7)</sup>  | COE         | 1.41:1                   | 940µH                                                            | 16.5<br>.4-2 MHz                        | 3.0<br>.4-2MHz               | 60<br>.40-320kHz                                   | -80 <sup>(12)</sup> | 2 or 3 | 3    |
| HT84-00596 <sup>(9)</sup>  | CPE         | 1:1:1:1                  | 410µH                                                            | 16<br>03-1.1MHz                         | 3.0<br>.3-2MHz               | 55<br>.25-1.1MHz                                   | -85 <sup>(12)</sup> | 2 or 3 | 2    |
| HT84-00597 <sup>(10)</sup> | COE         | 1:1.41                   | 475µH                                                            | 16<br>40-200kHz                         | 1.0<br>.3-2MHz               | 55<br>.25-1.1MHz                                   | -70 <sup>(12)</sup> | 2 or 3 | 2    |
| HT84-00879 <sup>(15)</sup> | CPE         | 1:1:1:1                  | 470µH±5%                                                         | 10<br>0.1-1.1MHz                        | 1.5<br>1MHz                  | 50<br>0.02-1.1MHz                                  | -82 <sup>(14)</sup> | 3      | 4    |
| HT84-00880 <sup>(16)</sup> | CPE         | 1:1:1:1                  | 470µH±5%                                                         | 8<br>0.1-1.1MHz                         | 1.0<br>1MHz                  | 50<br>0.02-1.1MHz                                  | -82 <sup>(14)</sup> | 3      | 4    |
| HT84-00881 <sup>(17)</sup> | CPE         | 1:1:1:1                  | 470.5µH±5%                                                       | 10<br>0.1-1.1MHz                        | 0.7<br>1MHz                  | 50<br>0.02-1.1MHz                                  | -82 <sup>(14)</sup> | 3      | 5    |
| HT84-99725 <sup>(2)</sup>  | CPE         | 1:1:1:1                  | 440µH                                                            | 16<br>.2-2MHz                           | 3.0<br>.4-2MHz               | 40<br>.25-1.1MHz                                   | -70 <sup>(12)</sup> | 2 or 3 | 3    |
| HT84-99726 <sup>(3)</sup>  | COE         | 1ct:1.2                  | 2.75mH                                                           | 16.5<br>.4-2MHz                         | 1.0<br>.3-1MHz               | 40<br>.25-1.1MHz                                   | -80 <sup>(12)</sup> | 2 or 3 | 1    |
| HT84-99727 <sup>(4)</sup>  | CPE         | 1.8:1                    | 12.96mH                                                          | 16<br>.3-1.1MHz                         | 1.0<br>.3-1MHz               | 40<br>.25-1.1MHz                                   | -75 <sup>(12)</sup> | 2 or 3 | 1    |
| HT84-99728 <sup>(5)</sup>  | CO/CP       | 1:1:1:1                  | 5.0mH                                                            | 16.5<br>.3-1.1MHz                       | 1.0<br>.3-2MHz               | 40<br>.25-1.1MHz                                   | -80 <sup>(12)</sup> | 2 or 3 | 3    |
| HT84-99729 <sup>(6)</sup>  | COE         | 1.41:1                   | 940µH                                                            | 16.5<br>.4-2MHz                         | 3.0<br>.4-2MHz               | 62<br>40-320MHz                                    | -70 <sup>(12)</sup> | 1      | 2    |
| HT84-99730 <sup>(8)</sup>  | CPE         | 1:1:1:1                  | 410µH                                                            | 16<br>.3-1.1MHz                         | 3.0<br>.3-2MHz               | 55<br>.25-1.1MHz                                   | -85 <sup>(12)</sup> | 2 or 3 | 3    |

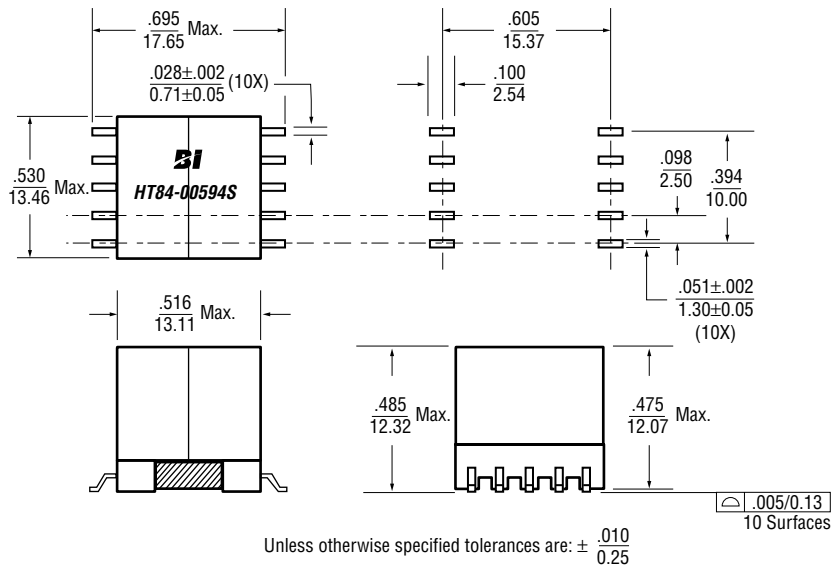
- Notes:** (1) Supports Alcatel MTK20131/134AFE with DCR ≤0.5/0.8Ω.  
(2) Supports Alcatel MTK20131/134AFE with DCR ≤2.0/1.2Ω.  
(3) Supports Motorola MC145650 (MC03AX1256CO line driver) with DCR ≤4.0/1.91, 1.91Ω.  
(4) Supports Motorola MC145650 (MC03AX1256CO line driver) with DCR ≤7.4/2.1, 2.1Ω.  
(5) Supports Analog Devices AD20MSP910/918 with DCR ≤3.0/3.0Ω.  
(6) Supports Globespan 7M640 with DCR ≤1.2/1.2Ω and DVV at 3,000 Vrms.  
(7) Supports Globespan 7M640 with DCR ≤1.2/1.2Ω.  
(8) Supports Elantec EL-1501 with DCR ≤1.0/1.0Ω.  
(9) Supports Alcatel MTK 20131/134AFE with DCR ≤1.3/1.2Ω.  
(10) Supports Elantec EL-1501 with DCR ≤1.4/2.2Ω.  
(11) OCL tested @ 10kHz, 100mV with appropriate IDC.  
(12) THD tested @ 5kHz, 6Vp-p with 100Ω load.  
(13) Longitudinal balance: frequency range specified at 100Ω.  
(14) THD tested @50kHz, 5.3 Vrms.  
(15) Supports ITeX Apollo II/STMicroelectronics with DCR : 2.53/2.56Ω.  
(16) Supports ITeX Apollo II/STMicroelectronics & Alcatel MTK-20140 with DCR : 3.4/3.45Ω.  
(17) Supports Globespan EL1501 with DCR <0.8/0.8Ω.

## SCHEMATICS



## OUTLINE DIMENSIONS (Inch/mm)

Figure 3 – Surface Mount



# OUTLINE DIMENSIONS (Inch/mm)

Figure 1 – Through-Hole

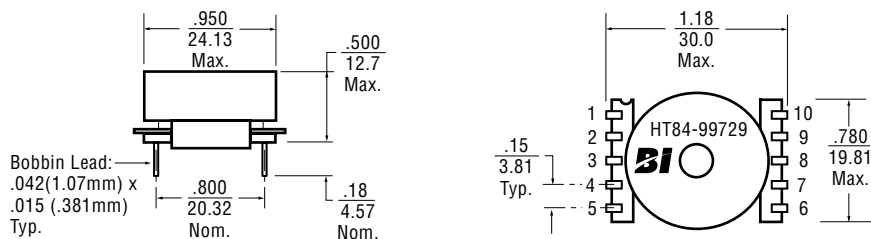
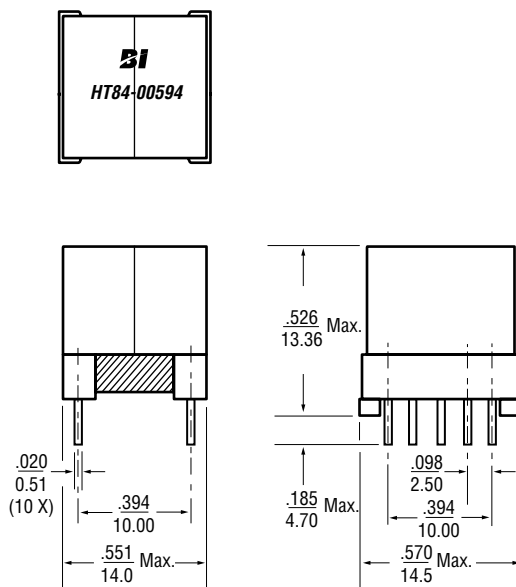


Figure 2 – Through-Hole



## PACKAGING

**Standard:** Plastic Tubes

|          |               |   |          |
|----------|---------------|---|----------|
| Capacity | Figure 1      | = | 45 Units |
|          | Figures 2 & 3 | = | 60 Units |

## ORDERING INFORMATION

Model Series: HT84 00594 S  
ADSL Transformers  
Surface Mount Option  
Factory Code (Package/Schematic)