

## Audio Transformer LL1550

LL1550 is an audio transformer with rather high turns ratio and with a variety of connection alternatives. The transformer is built up from two coils, each with a secondary winding surrounded by shields and two primary windings. This structure results in an excellent frequency response. All winding ends are available on the pins. The transformer is ideally used in applications where the high turns ratio is utilized, e.g. in a D.I. box. The LL1550 is made with amorphous core material. As this type of core does not store energy (unlike conventional mu-metal cores) the low frequency resonance with external capacitors is practically eliminated. Refer to the back side of this sheet for termination alternatives.

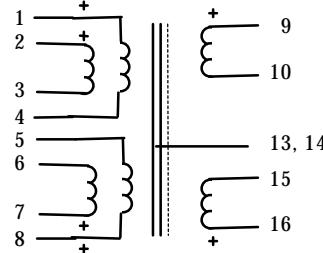
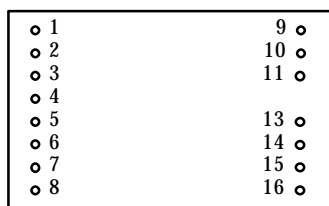
**Turns ratio:**

1 + 1 + 1 + 1 : 4 + 4

**Dims: (Length x Width x Height above PCB (mm))**

30 x 22.5 x 14.5

**Pin Layout (viewed from pins side) and Windings Schematics:**



**Spacing between pins:**

2.54 mm (0.1")

**Spacing between rows of pins:**

22.86 mm (0.9")

**Weight:**

30 g

**Rec. PCB hole diameter:**

1.5 mm

**Static resistance of each primary (average):**

33 Ω

**Static resistance of each secondary (average):**

265 Ω

**Self-resonance point:**

> 280 kHz

**Recommended load for best square-wave response**

(Termination alternative A below):

6.7 kΩ + 470 pF

**Frequency response**

(source 150Ω , load (6.7 kΩ + 470 pF) in parallel with 56 kΩ ):

10 Hz - 70 kHz +/- 0.5 dB @ 0 dBU

**Loss across transformer (at midband with termination as above):**

0.3 dB

**Core:**

Amorphous Strip

**Isolation between windings / between windings and shields:**

3 kV / 1.5 kV

**Data at different termination alternatives, showed on the back side of this sheet:**

Termination Alternative	Turns ratio	Copper Resistance prim/sec	No load impedance @40 Hz, 0dBu	Suggested Use	THD < 0.5% @40 Hz primary level / real source impedance
A	1:2	130Ω / 530Ω	40kΩ / 160kΩ	600 Ω / 10 kΩ	12 dBu / 150Ω
B	1:2	33Ω / 133Ω	10kΩ / 40kΩ	200Ω / 10 kΩ	6 dBu / 40Ω
C	1:4	33Ω / 530Ω	10kΩ / 160kΩ	200Ω / 5kΩ	6 dBu / 40Ω
D	1:4	8Ω / 133Ω	2.5kΩ / 40kΩ	200Ω / 1kΩ	-1 dBu / 10Ω
E	1:8	8Ω / 530Ω	2.5kΩ / 160kΩ	200Ω / 10kΩ	-1 dBu / 10Ω

F (Split) 4:1+1 530Ω / 66Ω + 66Ω

G (Split) 1:2+2 33Ω / 265Ω + 265Ω Left side can also be connected as B<sub>CenterTap</sub> (1:1+1) or D (1:2+2)

**LL1550 Termination Alternatives**  
(Left side is input if not stated otherwise)  
**!!!! Pin's side views !!!!**

