

## Audio Transformer LL1545A

LL1545A is a general-purpose audio transformer 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. The transformer can be used in many different applications such as a high impedance line input transformer (accepting signal levels of 22 dBu @ 40 Hz with primaries in series), for splitting or as a microphone input transformer.

The LL1545A is made with a mu-metal core and is housed in a mu-metal can. Refer to page 2 of this sheet for termination alternatives.

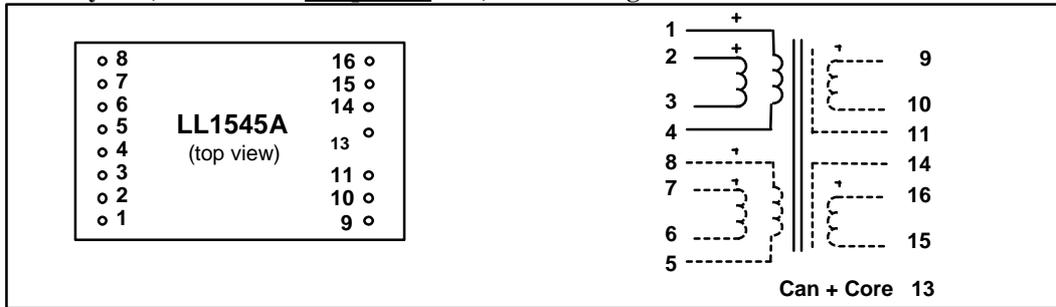
**Turns ratio:**

1 + 1 + 1 + 1 : 2 + 2

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

37 x 22.5 x 14.5

**Pin Layout (viewed from component side) and windings schematics:**



**Spacing between pins:**

2.54 mm (0.1")

**Spacing between rows of pins:**

22.86 mm (0.9")

**Weight:**

46 g

**Rec. PCB hole diameter**

1.5 mm

**Static resistance of windings:** 2-3 or 6-7

122 Ω

1-4 or 5-8

182 Ω

9-10 or 15-16

305 Ω

**Self resonance point:**

> 220 kHz

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

(Termination alternative R4B:L4B over):

6.7 kΩ + 470 pF

**Frequency response** (source 600Ω, load (6.7 kΩ + 470

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

pF) in parallel with 56 kΩ):

**Loss across transformer** (at 1 kHz with termination as above):

0.3 dB

**Core:**

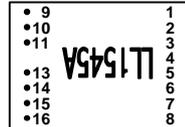
Mu-metal

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

3 kV / 1.5 kV

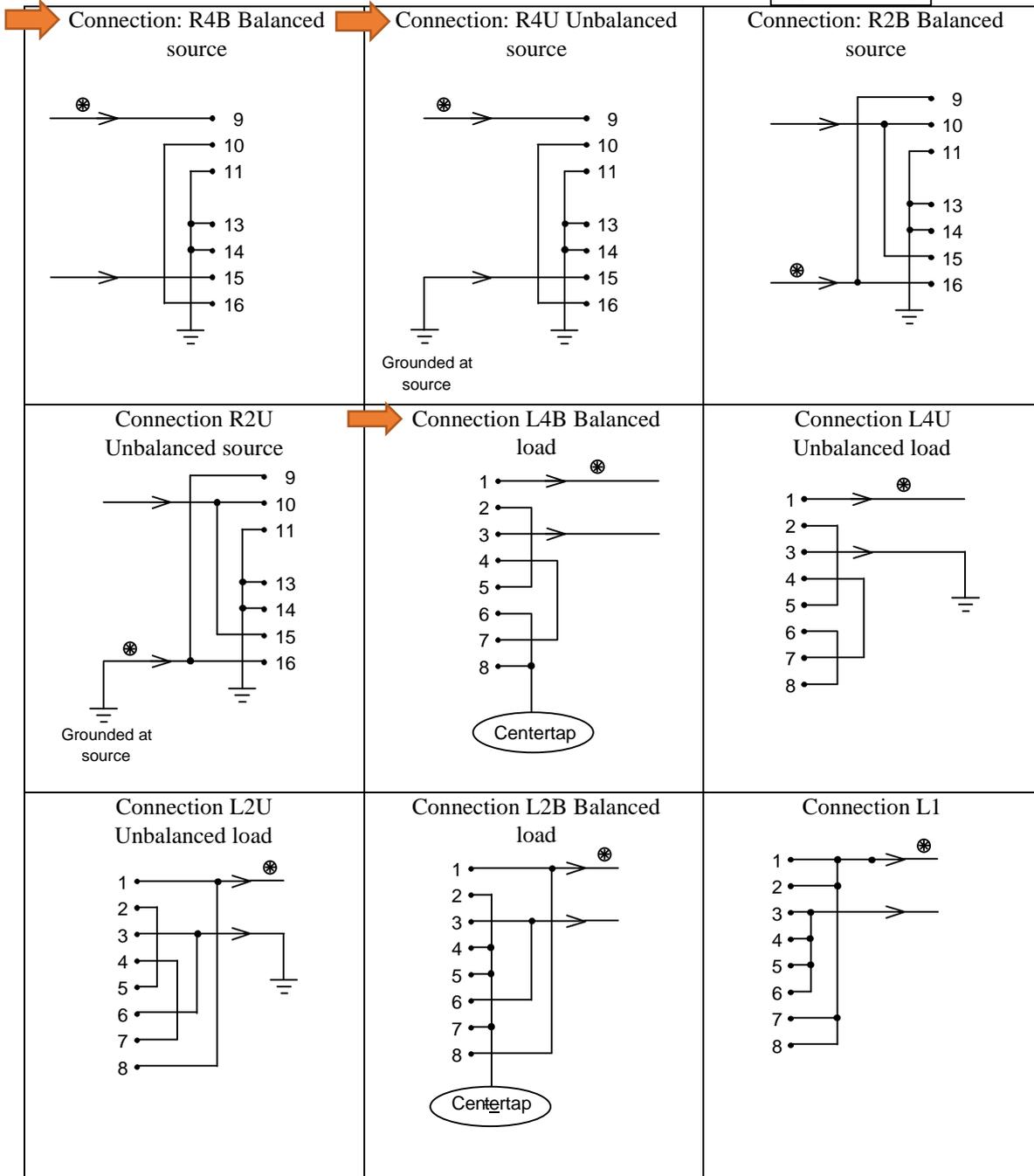
**Data at different termination alternatives, showed on page 2 of this data sheet.**

Termination Alternatives	Turns ratio	Copper Resistance Prim/sec	Idle impedance @40 Hz, 0dBu	Suggested Use	THD < 0.2% @40 Hz primary level / real source impedance
<b>R4B / R4U : L4B / L4U</b>	1:1	610 Ω / 610 Ω	80 kΩ / 80 kΩ	10 kΩ / 10 kΩ	22 dBu / 600 Ω
<b>R2B / R2U : L2B / L2U</b>	1:1	150 Ω / 150 Ω	20 kΩ / 20 kΩ	600 Ω / 600 Ω	16 dBu / 150 Ω
<b>R2B / R2U : L4B / L4U</b>	1:2	150 Ω / 610 Ω	20 kΩ / 80 kΩ	600 Ω / 2.5 kΩ	16 dBu / 150 Ω
<b>R4B / R4U : L2B / L2U</b>	2:1	610 Ω / 150 Ω	80 kΩ / 20 kΩ	10 kΩ / 2.5 kΩ	22 dBu / 37.5 Ω
<b>R4B / R4U : L1</b>	4:1	610 Ω / 75 Ω	80 kΩ / 5 kΩ	10 kΩ / 600 Ω	22 dBu / 37.5 Ω



Connection alternatives for LL1545A Component side view

Component side view



Turns ratio	Application	Transformer Input (primary)	Transformer Output (secondary)
1:1	Line input to unbalanced circuits	R4B / R4U	L4U
1:2	Line input to unbalanced circuits	R2B / R2U	L4U
2:1	Line input to unbalanced circuits	R4B / R4U	L2U
1:1	Low impedance line input to unbalanced circuits	R2B / R2U	L2U
1:1	Line input to balanced circuits	R4B / R4U	L4B
1:2	Line input to balanced circuits	R2B / R2U	L4B
2:1	Line input to balanced circuits	R4B / R4U	L2B
1:1	Low impedance line input to balanced circuits	R2B / R2U	L2B

