

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.

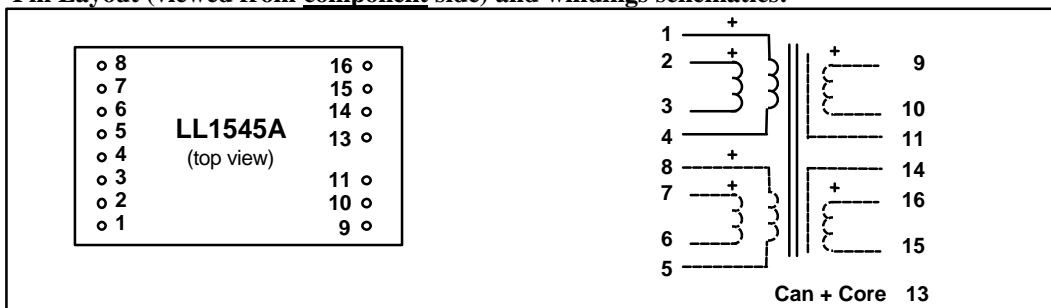
Turns ratio:

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 ,

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

load (6.7 kΩ + 470 pF) in parallel with 56 kΩ):

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

0.3 dB

Core:

Mu-metal

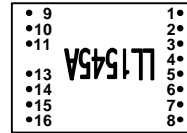
Isolation between windings / between windings and shields:

3 kV / 1.5 kV

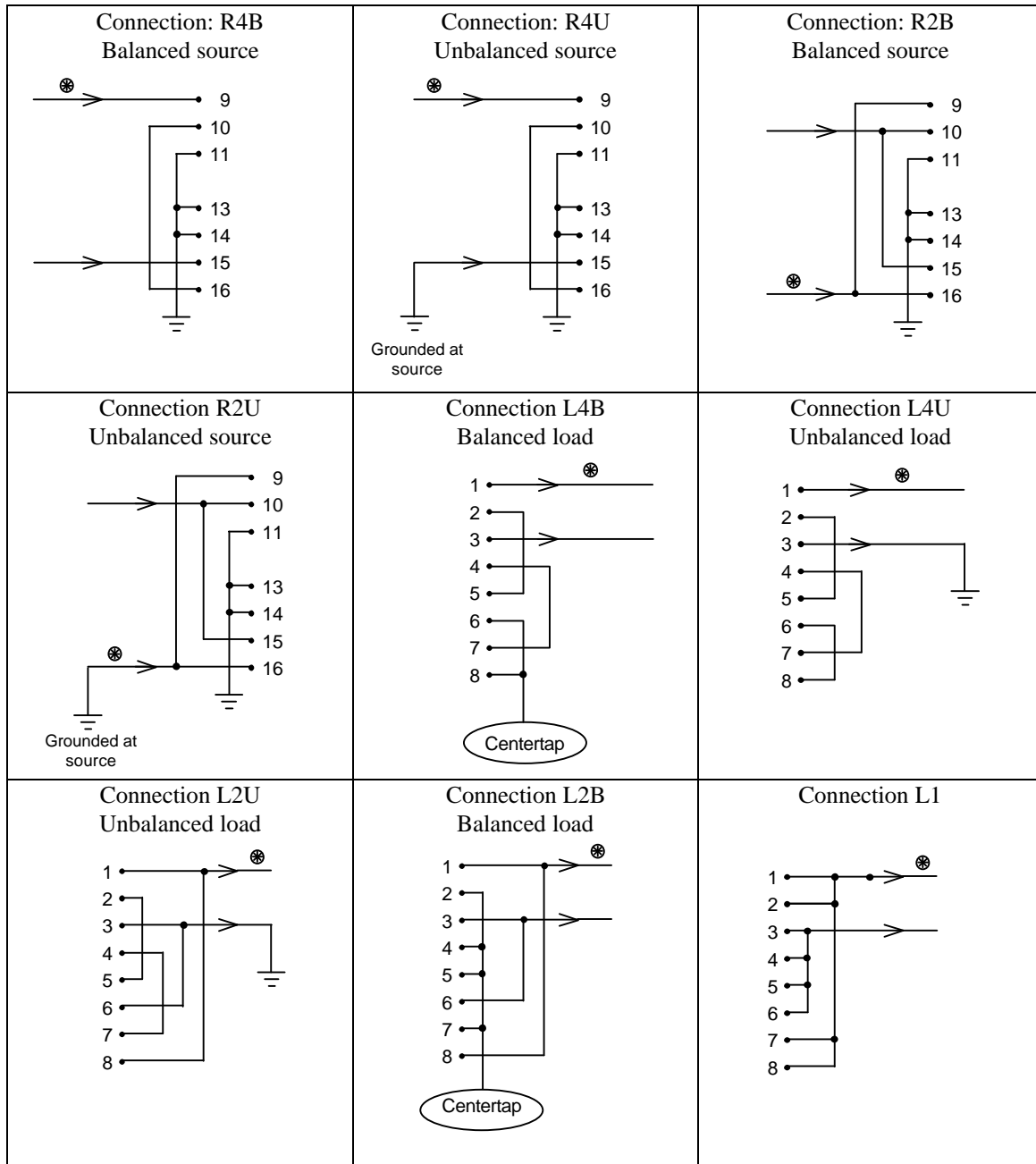
Data at different termination alternatives, showed on page 2 of this data sheet.

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
R4B / R4U : L4B / L4U	1:1	610 Ω / 610 Ω	80 kΩ / 80 kΩ	10 kΩ / 10 kΩ	22 dBu / 600 Ω
R2B / R2U : L2B / L2U	1:1	150 Ω / 150 Ω	20 kΩ / 20 kΩ	600 Ω / 600 Ω	16 dBu / 150 Ω
R2B / R2U : L4B / L4U	1:2	150 Ω / 610 Ω	20 kΩ / 80 kΩ	600 Ω / 2.5 kΩ	16 dBu / 150 Ω
R4B / R4U : L2B / L2U	2:1	610 Ω / 150 Ω	80 kΩ / 20 kΩ	10 kΩ / 2.5 kΩ	22 dBu / 37.5 Ω
R4B / R4U : L1	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