

Audio Transformer LL1544A

LL1544A is a line input / general purpose audio transformer which can be used in many different applications ranging from bridging input to microphone input applications. The transformer is built up from two three-section coils with interleaved Faraday shields. The core is a two-component amorphous strip core. This core type combines a high sensitivity for very low signal levels with excellent high-level capabilities. In addition, as this type of core does not store energy (unlike conventional mu-metal cores), at low frequencies phase response is excellent and resonance with a series capacitor is practically eliminated.

The LL1544A replaces previous types LL1544 and LL1554.

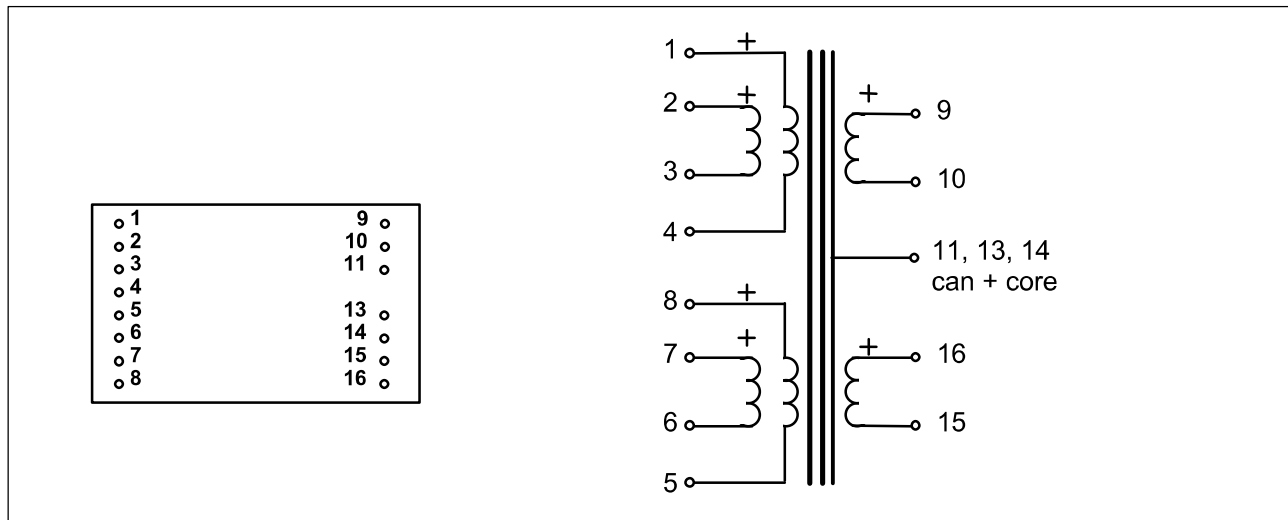
Turns ratio:

1 + 1 + 1 + 1 : 2 + 2

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:

27 g

Rec. PCB hole diameter:

1.5 mm

Static resistance of each primary (average):

130 Ω

Static resistance of each secondary (average):

260 Ω

Self resonance point:

> 220 kHz

Recommended load for best square-wave response

6.7 kΩ + 470 pF

(Termination alternative A below):

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 1kHz with termination as above):

0.2 dB

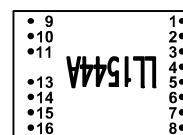
Isolation between windings / between windings and shields:

3 kV / 1.5 kV

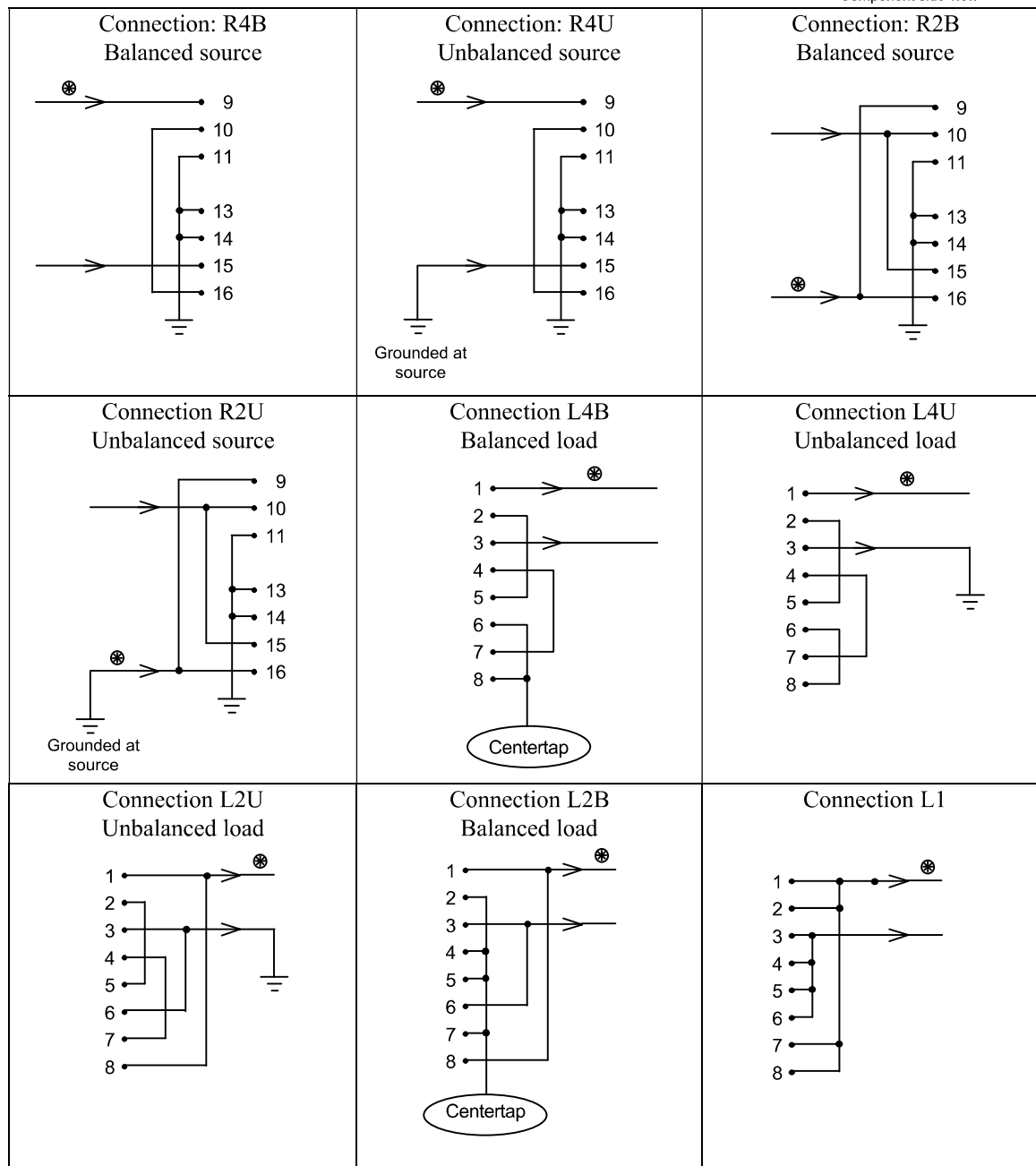
Data at different termination alternatives, showed on the following page:

Termination Alternative	Turns ratio	Copper Resistance Prim/sec	Idle impedance @40 Hz, 0dBu	Suggested Use	THD < 0.5% @ 50 Hz primary level / real source impedance
R4B / R4U : L4B / L4U	1:1	520Ω / 520Ω	80kΩ / 80kΩ	10 kΩ / 10 kΩ	20 dBu / 600Ω
R2B / R2U : L2B / L2U	1:1	130Ω / 130Ω	20kΩ / 20kΩ	600Ω / 600Ω	14 dBu / 150Ω
R2B / R2U : L4B / L4U	1:2	130Ω / 520Ω	20kΩ / 80kΩ	600Ω / 2.5 kΩ	14 dBu / 150Ω
R4B / R4U : L2B / L2U	2:1	520Ω / 130Ω	5kΩ / 20kΩ	10 kΩ / 2.5 kΩ	22 dBu / 37.5Ω
R4B / R4U : L1	4:1	520Ω / 65Ω	80kΩ / 5kΩ	10 kΩ / 600Ω	22 dBu / 37.5Ω

Connection alternatives for LL1544A
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