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Audio Transformer LL1544

LL1544 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. All winding ends are available on the pins. Thus, 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), or as a medium impedance microphone input transformer.

The LL1544 is made with amorphous core material. As this type of core does not store energy (unlike conventional mu-metal cores) the low frequency resonances with external capacitors is practically eliminated. Refer to the back side of this sheet for termination alternatives.

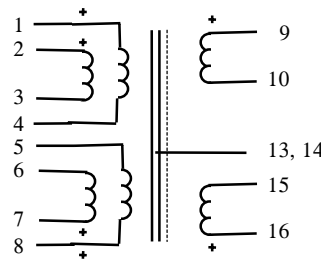
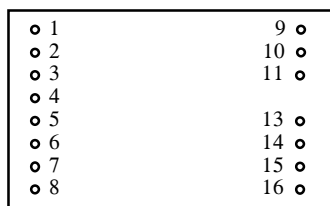
Turns ratio:

1 + 1 + 1 + 1 : 2 + 2

Dims: (Length x Width x Hight 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 (Termination alternative A below):

6.7 kΩ + 470 pF

Frequency response (source 600Ω , 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):

0.2 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	Idle impedance @40 Hz, 0dBU	Suggested Use	THD < 0.5% @40 Hz primary level / real source impedance
A	1:1	520Ω / 520Ω	80kΩ / 80kΩ	10 kΩ / 10 kΩ	22 dBU / 600Ω
B	1:1	130Ω / 130Ω	20kΩ / 20kΩ	600Ω / 600Ω	16 dBU / 150Ω
C	1:2	130Ω / 520Ω	20kΩ / 80kΩ	600Ω / 10kΩ	16 dBU / 150Ω
D	1:2	33Ω / 130Ω	5kΩ / 20kΩ	200Ω / 1kΩ	10 dBU / 37.5Ω
E	1:4	33Ω / 520Ω	5kΩ / 80kΩ	200Ω / 10kΩ	10 dBU / 37.5Ω
F (Split)	2:1+1	520Ω / 260Ω + 260Ω			
G (Split)	1:1+1	130Ω / 260Ω + 260Ω	Left side can also be connected as B _{CenterTap} (1:1+1) or D (1:2+2)		