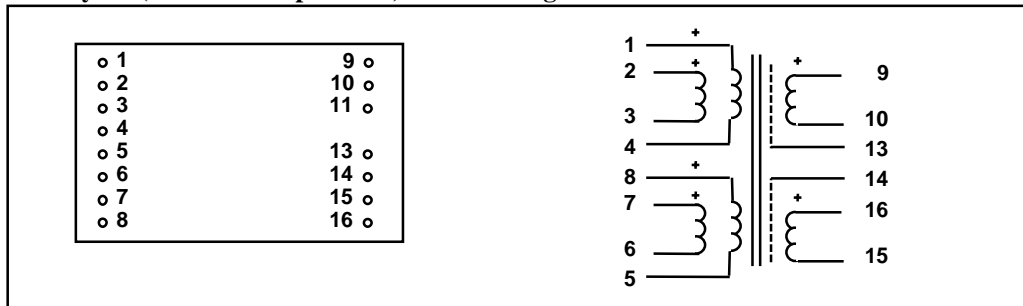


## Audio Transformer LL1554

LL1554 is a general-purpose audio transformer, with a variety of connection alternatives. It differs from the LL1544 only in core material, which has a lower saturation point, and is slightly cheaper. 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 20 dBU @ 40 Hz with primaries in series), or as a medium impedance microphone input transformer.

The LL1554 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 : 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:**



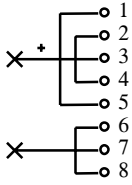
**Spacing between pins:** 2.54 mm (0.1")  
**Spacing between rows of pins:** 22.86 mm (0.9")  
**Weight:** 27 g  
**Rec. PCB hole diameter:** 1.5 mm  
**Static resistance of each primary (average):** 130 Ω  
**Static resistance of each secondary (average):** 260 Ω  
**Self resonance point:** > 220 kHz  
**Recommended load for best square-wave response**  
 (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:**

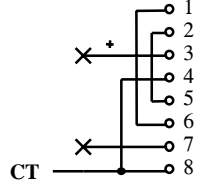
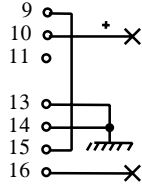
Termination Alternative	Turns ratio	Copper Resistance prim/sec	Idle impedance @40 Hz, 0dBu	Suggested Use	THD < 0.5% @40 Hz primary level / real source impedance
A	1:1	520Ω / 520Ω	30kΩ / 30kΩ	10 kΩ / 10 kΩ	20 dBu / 600Ω
B	1:1	130Ω / 130Ω	7.5kΩ / 7.5kΩ	600Ω / 600Ω	14 dBu / 150Ω
C	1:2	130Ω / 520Ω	7.5kΩ / 30kΩ	600Ω / 10kΩ	14 dBu / 150Ω
D	1:2	33Ω / 130Ω	2kΩ / 7.5kΩ	200Ω / 1kΩ	8 dBu / 37.5Ω
E	1:4	33Ω / 520Ω	2kΩ / 30kΩ	200Ω / 10kΩ	8 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<sub>CenterTap</sub> (1:1+1) or D (1:2+2)

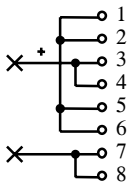
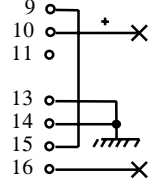
**LL1554 Termination Alternatives**  
(Left side is input if not stated otherwise)  
**!!!! Pin's side views !!!!**



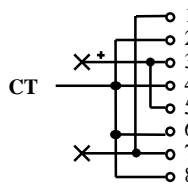
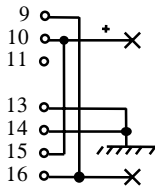
**A**



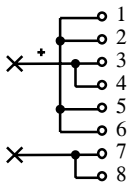
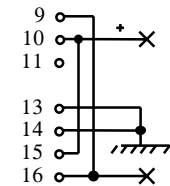
**A**  
CENTER TAP



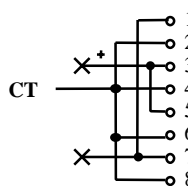
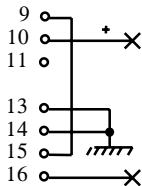
**B**



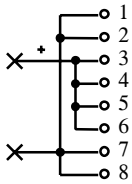
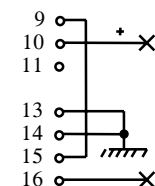
**B**  
CENTER TAP



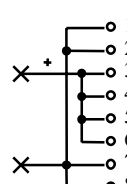
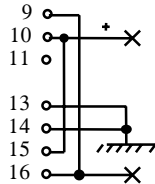
**C**



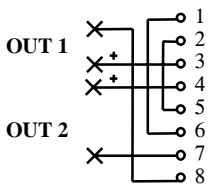
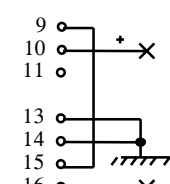
**C**  
CENTER TAP



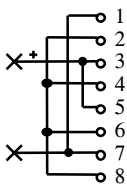
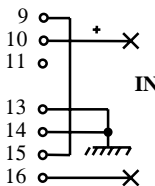
**D**



**E**



**F**  
SPLIT



**G**  
SPLIT

