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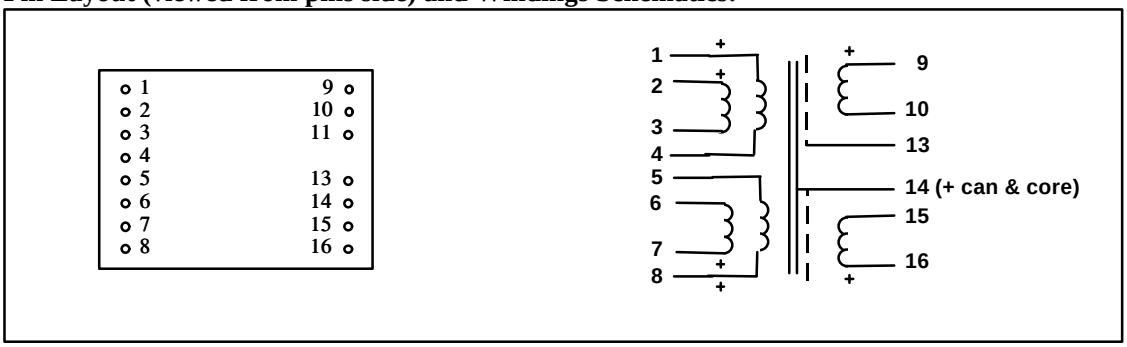
Audio Transformer
LL1646

LL1646 is a general purpose, medium inpedance audio transformer, with a varity 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 medium or low impedance input transformer, or as an output transformer.
The LL1646 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 15
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: 30 g
Rec. PCB hole diameter: 1.5 mm
Static resistance of <u>each</u> primary (average): 22 Ω
Static resistance of <u>each</u> secondary (average): 45 Ω
Self resonace point: > 500 kHz
Recommended load for best square-wave response (Termination alternative A below):
2.2 kΩ + 470 pF
Frequency responce (source 150Ω , load 2.2 kΩ):
10 Hz - 200 kHz +/- 0.5 dB @ 0 dBU
Loss across transformer (at midband with termination as above): 0.8 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 < 1 % @40 Hz primary level / real source impedance
A	1:1	90Ω / 90Ω	16kΩ / 16kΩ	600 Ω / 600 Ω	12 dBU / 150Ω
B	1:1	22Ω / 22Ω	4kΩ / 4kΩ	200 Ω / 200 Ω	6 dBU / 40Ω
C	1:2	22Ω / 90Ω	4kΩ / 16kΩ	200 Ω / 10kΩ	6 dbU / 40Ω
D	1:2	5.5Ω / 22Ω	1kΩ / 4kΩ	50Ω / 200 Ω	0 dBU / 10Ω
E	1:4	5.5Ω / 90Ω	1kΩ / 16kΩ	50Ω / 10kΩ	0 dBU / 10Ω
F (Split)	2:1+1	90Ω / 45Ω + 45Ω			
G (Split)	1:1+1	22Ω / 45Ω + 45Ω	Left side can also be connected as $B_{CenterTap}$ (1:1+1) or D (1:2+2)		