

Class-D Digital Audio Inductors



What are Class-D Digital Audio Inductors?

The WE-HIDA and WE-LHMD are designed to be used in high quality Class-D audio applications. The parts have been tested and optimized in real applications to reduce total harmonic distortion and noise (THD+N) and idle mode losses significantly.

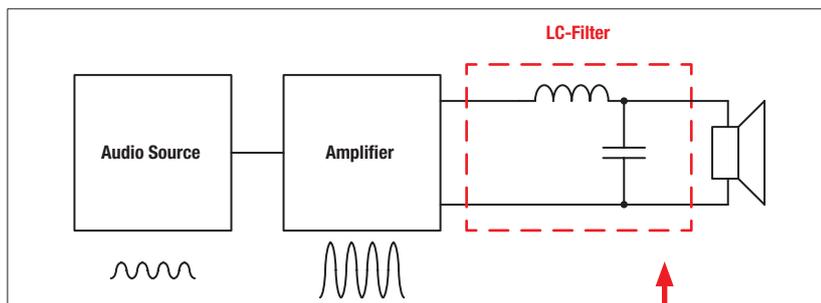
- Special selected core materials for best THD+N performance
- Low R_{DC} for decreased idle mode losses
- 2-in-1 designs for low profile in full bridge circuitries

Our webinar on Class-D inductors:
www.we-online.com/class-d



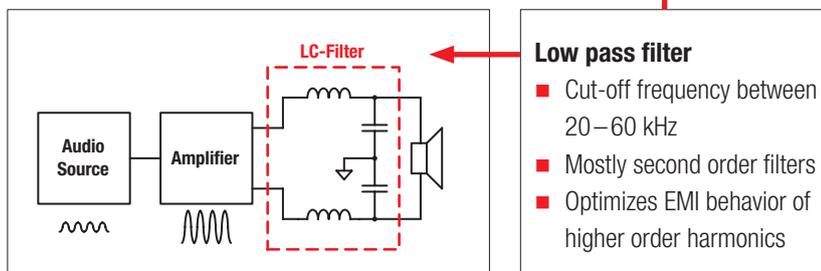
Half bridge circuit

- Less components needed
- Bus-pumping issue



Full bridge circuit

- Double voltage swing
- Lower gain increase before cut-off frequency



Low pass filter

- Cut-off frequency between 20–60 kHz
- Mostly second order filters
- Optimizes EMI behavior of higher order harmonics

Design-In Steps

1st Step

Define LC-Filter requirements:
 Cut-off frequency, inductance value,
 switching frequency, speaker impedance.



2nd Step

Check current capability:
 RMS and peak currents.



3rd Step

Select single or dual inductor type
 with correct current capability.



4th Step

Optimize PCB layout for EMI
 reduction with filter components.

Our audio inductors are available in THT (WE-HIDA) and SMT (WE-LHMD) to provide the right mounting style for your application.

Sizes SMT (WE-LHMD): 1008, 1213

Sizes THT (WE-HIDA): 1415, 1480, 1521, 1715, 3119



Learn more about audio inductors:
www.we-online.com/digital-audio