

SOWTER TYPE 1495

DAC Transformer 1:9+9. Replaces 8347 and 9762

Applications

100% Mumetal, high ratio low cost transformer for interfacing between Digital/Analogue Converter to tube amplifier. For use with a 100 ohm or less current to voltage conversion resistor. Can be configured ar 1:9 or 1:18 Mumetal can.

A competitively priced transformer for use with most current out Digital-to-Analogue Converters. Works well with any current out DAC. Provides current to voltage conversion, voltage gain to achieve at least a line level signal (0 dBu 0.775V) depending on the I/V resistor used. Presents a low impedance to the DAC output for best frequency response and quantisation noise reduction. Provides significant sound quality improvement when compared to other interface methods. Ensures full isolation of digital noise in ground and supply rails.

We recommend that the I/V resistor is placed across the secondary of the transformer but a primary resistor may be used instead for a different filtering characteristic. (higher roll off frequency). The I/V resistor value should not exceed 100 Ohms referred to the primary (See below). Lower values may improve the sound but will reduce the output level. Can be configured to drive 9335 attenuator without loss of bandwidth. Can be used driven from multiple parallel DAC's to increase output level.

The secondary must be connected to a high impedance amplifier. 100K Ohms or higher.



Features

Mumetal core for minimal harmonic distortion. Mumetal can for magnetic shielding. Twin secondary windings for driving differential (push-pull) amplifier. These may be used in parallel to give a ratio of 1:8 which will improve the bandwidth and reduce the output impedance. Package options.

HOW TO CALCULATE THE I/V RESISTOR (example)

Current out = +/- 1 mA = 2 mA p-p = $2 / 2.82$ mA = 0.88 mA RMS.

Configuration: Secondary coils in series. Ratio = 1:18

Secondary current = 0.049 mA

Secondary load resistor for line level (0.775V) = $0.775 / 0.000049$ = 15.8K Ohms. Allow 10% for copper loss. Use 18K Ohms. DAC will see about 65 Ohms.

Configuration: Secondary coils in parallel. Ratio = 1:9

For line level out use 4.2K Ohms secondary load. DAC will see about 70 Ohms.

Suitable DACS:

AD1860N AD1862 AD1865 DSD1792 PCM1702 PCM1704 PCM1738 PCM1792 PCM1794
PCM1795 PCM1796 PCM1798 PCM2702 PCM56 PCM63 TDA1540 TDA1541A TDA1543
TDA1545A TDA1547

Specifications

Item	Value
CAN DIMENSIONS	34 mm Dia. x 24 mm. High
PRIMARY INDUCTANCE (each coil)	0.72 H Typical
PRIMARY DC RESISTANCE	3.4 Ohms Typical
SECONDARY DC RESISTANCE (2 coils in series)	965 Ohms approx
RATIO	1 : 9 + 9
FREQUENCY RESPONSE (Typical)	
Parallel secondary windings	+/- 1.5 dB 10Hz to 60 kHz
Series secondary windings	+/- 1.5 dB 5 Hz to 50 kHz

Mechanicals

Size: **E** Style: **e**

