

Audio Feast

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FINEMET PCM63 Transformer 1+1 : 5+5



Specification:

| | |
|-----------------------|---|
| Transformer Ratio: | 1+1 : 5+5 (0 – 300 ohm, 0 – 300 ohm : 0 – 8K, 0 – 8K) |
| Maximum output level: | 10V at 5Hz, 20mA with series secondary connection |
| Primary inductance: | 5H (minimum) at 20Hz with 0 – 300 ohm |
| DCR: | 3.42 ohm at 0 – 300 ohm parallel 320 ohm at 0 – 32K ohm series |

Secondary load resistor for 1:10 configuration for PCM63:

| | |
|-----------------------|--|
| Primary connection: | parallel (300 ohm) |
| Secondary connection: | series (32K) |
| DAC output current: | $4\text{mA}_{p-p} = 4 \times 0.345 = 1.4\text{mA rms}$ |
| Secondary current: | $1.4\text{mA} / 10 = 0.14\text{mA rms}$ |
| Output voltage: | 1V _{rms} |
| Secondary load R: | $R = V/I = 1\text{V} / 0.14\text{mA} = 7142\text{K}$ R=8.2K ohm (with insertion loss) |

The secondary load R value can change sound characteristics. Optimum sound is depending on your system configurations. I would use 10K potentiometer and search for the sweet spot. Once you find the optimum value, replace it with a fixed value resistor.

Wiring Diagram:

