

RW-40-9.5 is R core audio output transformer for single ended type amplifier. Excellent magnetic properties of R core as well as precisely wound construction of the coil by the computerized manufacturing system achieve the wide bandwidth, low distortion, and low magnetic loss of the transformer.

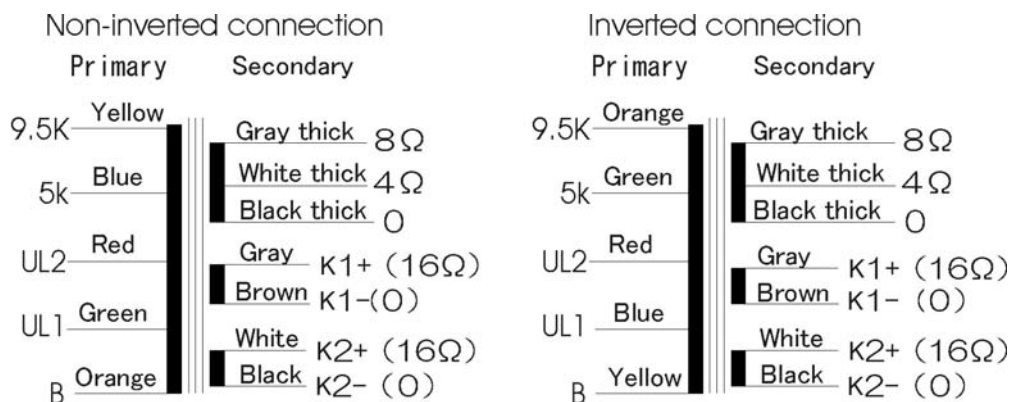
1. What is R core Output Transformer?

R core power transformers are now increasingly introduced for the high-end HiFi components because of its excellent technical advantages. R core is of non-cut construction and has excellent magnetic properties. The magnetic core used for audio output transformer has evolved from EI core, cut core, and to toroidal core achieving successful results to improve the performance of the transformer. R core has several advantages over toroidal core that has been evaluated as the best. In fact, R core enables further technical improvements of the audio output transformer.

2. Outline

- Power handling capacity 40W, primary impedance 5,000 ohms or 9,500ohms, equipped with ultra-linear taps and cathode feed back winding, the best match for single ended tube amplifier using 211,845, GM70, etc.
- The combination of high performance core and generous turns of coil winding assures high primary inductance presenting good sound quality such as solidness of mid and low range.
- Precisely wound coil has no peculiar peaks and dips in attenuation characteristic and excellent response at high frequency, so enabling stable NFB operation and transparent sound quality.
- Perfect balance coil design realizes the low distortion factor even with non-NFB amplifier.
- Enclosed in a handy and beautiful square case. The same mounting dimensions as those of Tango XE60, FC-30.

3. Specifications



| | |
|--|--|
| Type | for Single-Ended |
| Output capacity | 40W/35Hz |
| Primary impedance | 5,000 ohms, 9,500 ohms, with UL tap |
| Secondary impedance | 4 ohms, 8ohms |
| 3rd. | cathode feed back winding 16 ohms X 2 |
| Frequency bandwidth | 25Hz to 35Khz (-2dB), input=4V, signal source impedance=5,000 ohms 25Hz to 35Khz (-2dB), input=4V, signal source impedance=9,500 ohms |
| Primary inductance (H) | 17H(min.), 23H(max.) (5,000 ohms, DC current 80mA) 38H(min.), 42H(max.) (9,500 ohms, DC current 60mA) |
| Primary permissible DC current | 110mA(5,000 ohms), 90mA(9,500 ohms) |
| Recommended primary DC current | 90mA or less (5,000 ohms), 80mA or less (9,500 ohms) |
| Power loss | 0.21dB 8ohms |
| Dielectric withstanding voltage between primary and secondary | 2KVAC |
| Maximum permissible voltage of primary P-P | 2KVAC |
| Core | Type R160 160W core |
| Shape | Enclosed in square case, the same mounting |

| | |
|-------------------------------|--|
| | dimensions as those of Tango XE60, FC-30 |
| Connections | Lead wires |
| Overall dimensions and weight | W: 110mm, D: 100mm, H: 150mm, Wt.: 3Kg |

4. Selection of load impedance and phase

The table below describes the selection of load impedance and the relation of the phase between the primary and secondary and 3rd. You can select non-inverted connection between the primary and secondary and 3rd for two-stage amplifier and inverted connection for three-stage amplifier. When the load is selected to 9,500 ohms, two taps for UL are available; its feedback ratio is 50% or 25%. The higher ratio makes the plate resistance and distortion factor lower, however, the sensibility and output power will be reduced.

| Connected to | Non-inverted 9,500 ohms | Non-inverted 5,000 ohms | Inverted 9,500 ohms | Inverted 5,000 ohms |
|-------------------------------|----------------------------|----------------------------|-------------------------|------------------------|
| Plate | Yellow | Blue | Orange | Green |
| Screen grid (UL tap ratio) | Red (50%) Green (25%) | Green (33%) | Red (50%) Blue (25%) | Blue (33%) |
| Power source | Orange | Orange | Yellow | Yellow |

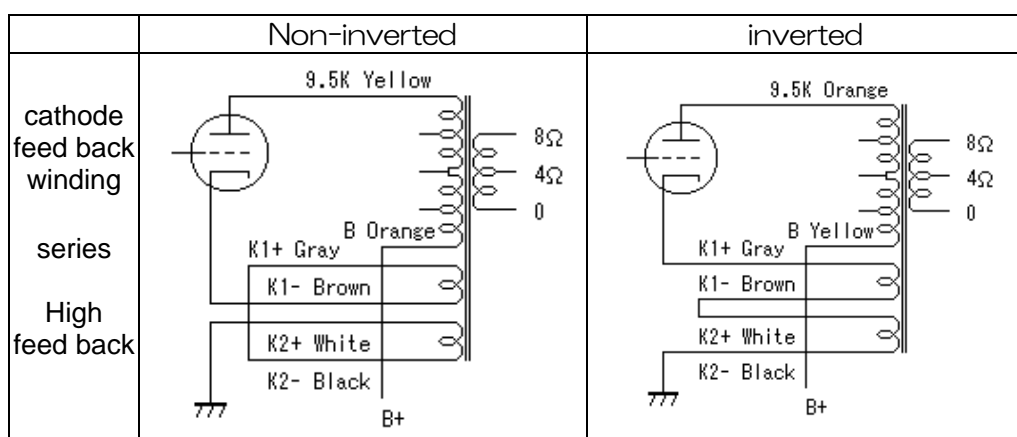
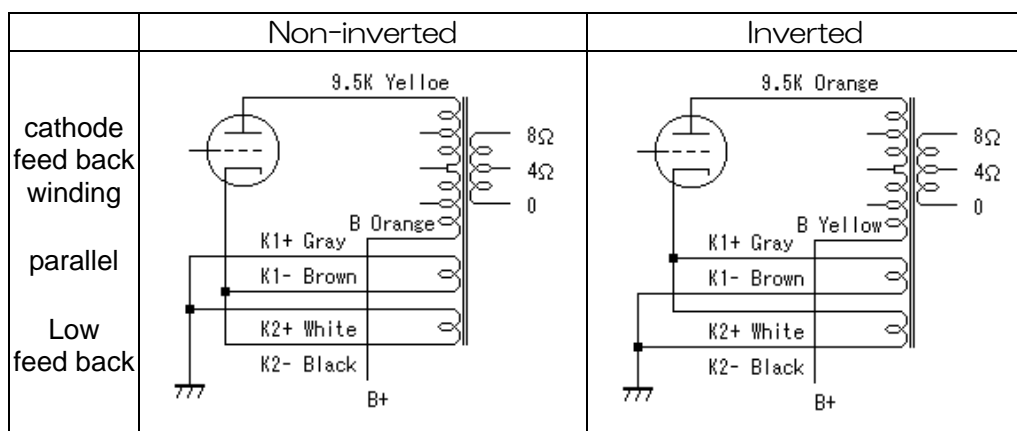
5. Cathode feed back winding

When using the cathode feed back winding, the connection of primary winding and cathode feed back winding is as follows. In the case of self-bias f, self-bias resistance and a bypass capacitor are connected between K1-Brown and a ground and between K2+ white and a ground.

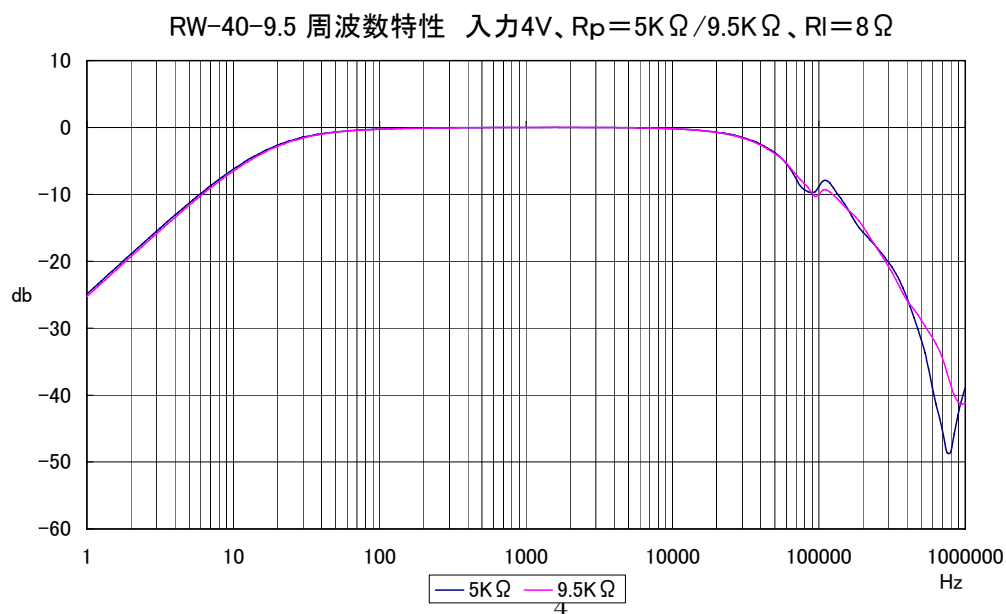
There are two cathode feed back windings in RW-40-9.5. The amount of the cathode feed back can be selected whether two windings being used in parallel or using it for the series.

The amount of the cathode feed back decreases if it uses it in parallel. The amount of the cathode feed back increases if it uses it for the series.

In addition, RW-40-9.5 is different use according to whether it uses by the Non-inverted connection or it uses it by the Inverted connection. The table below shows the connection of each situation.

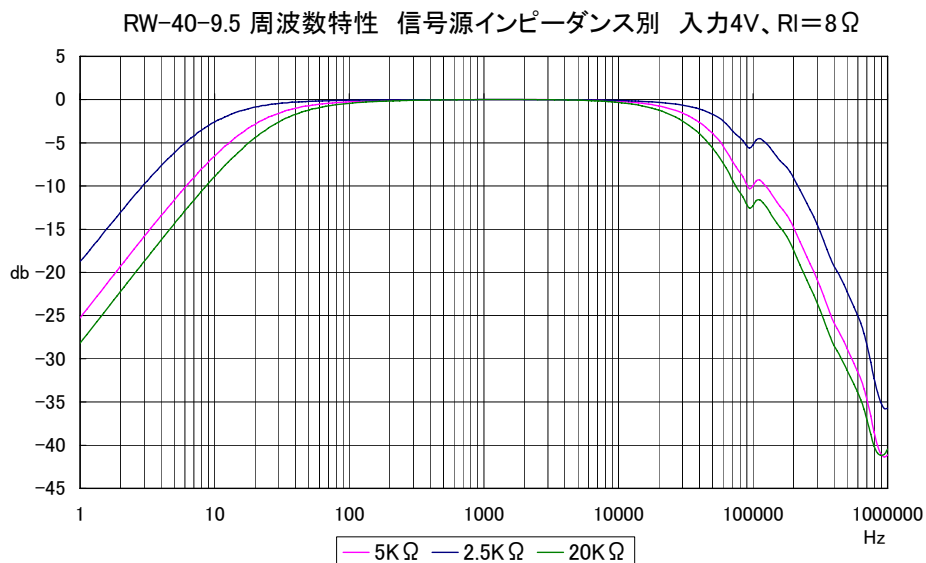


6. Frequency Characteristics

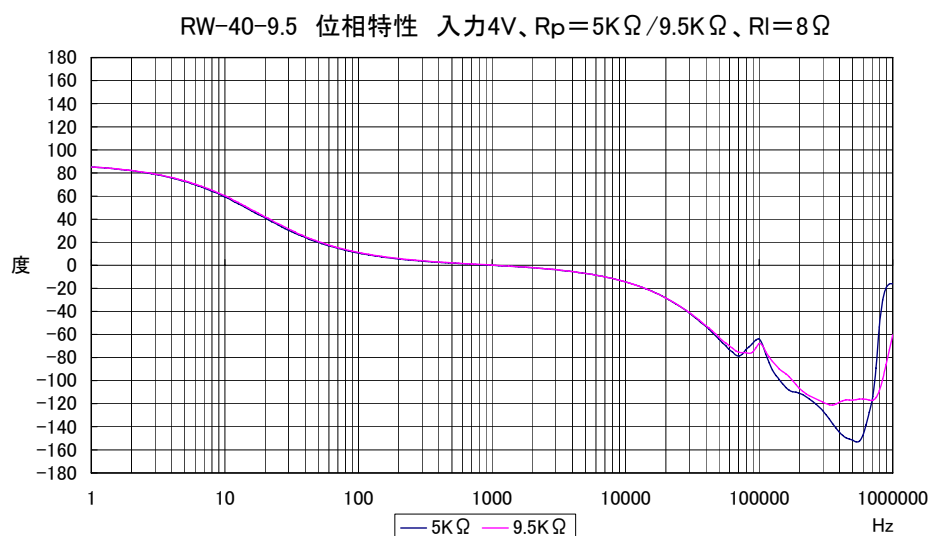


7. Frequency Characteristic: with different source impedances

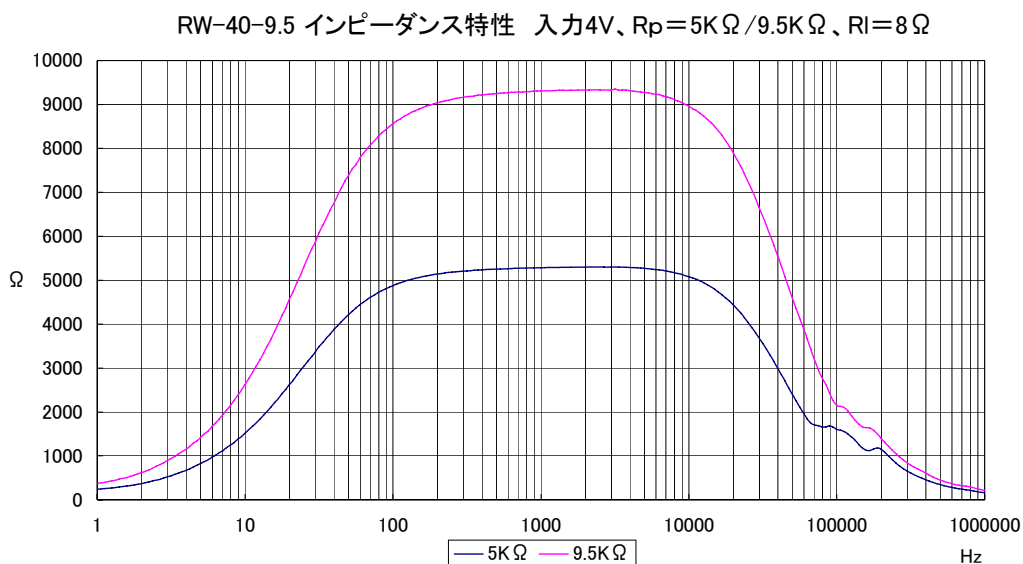
The frequency characteristic of the audio output transformer varies with the signal source impedance that drives the transformer.



8. Phase Characteristic

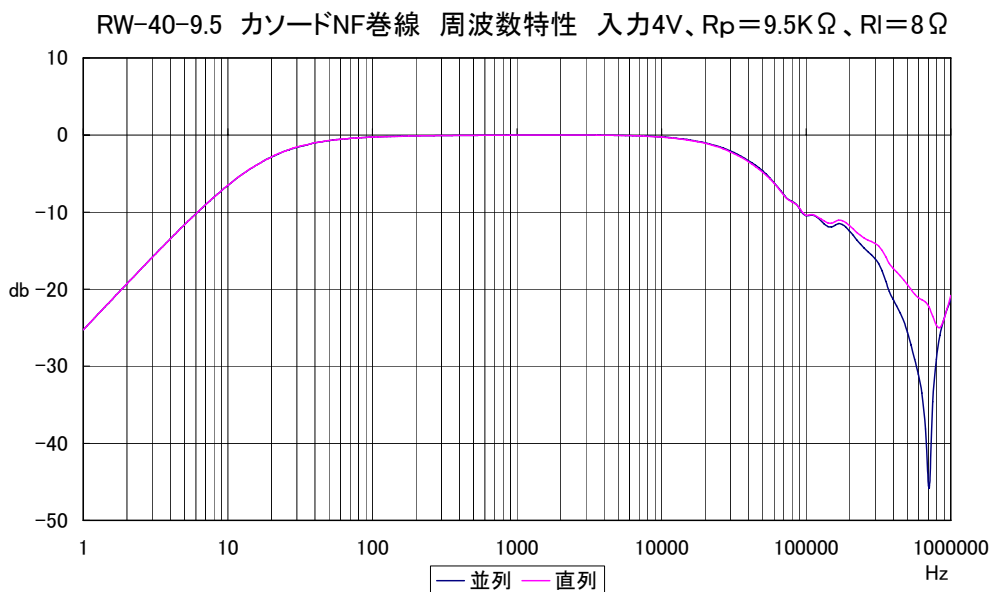


9. Primary Inductance Characteristic

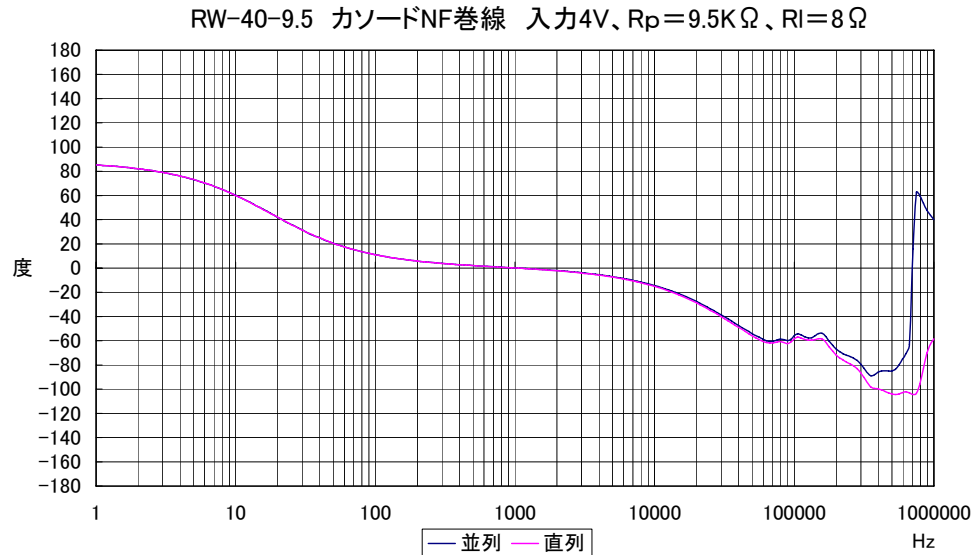


10. Cathode feed back winding Characteristic

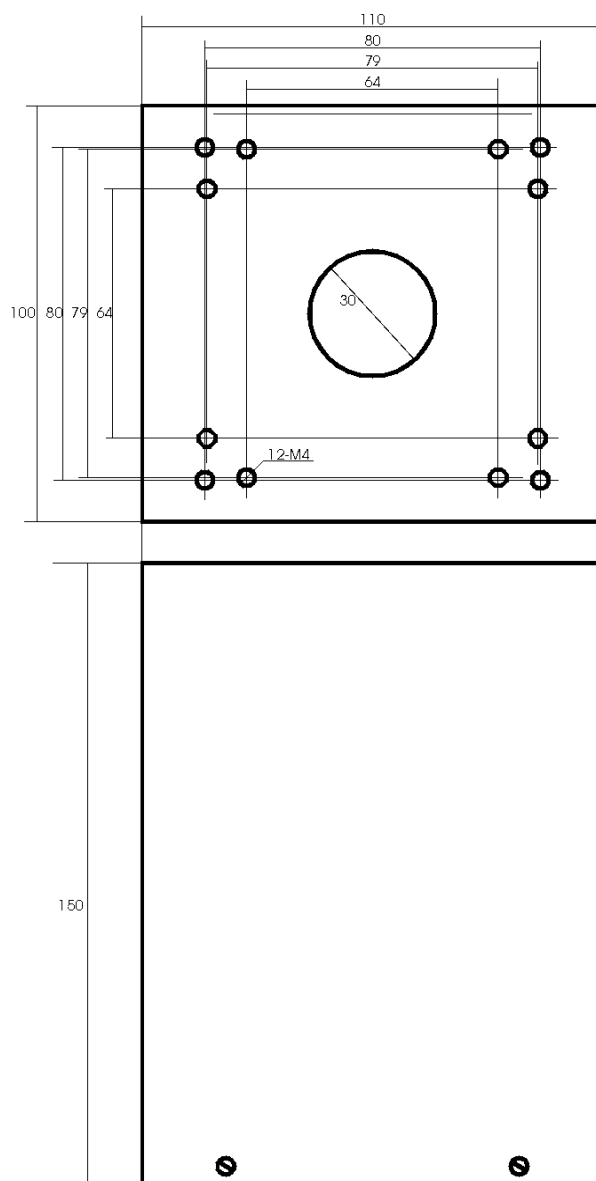
10.1 Frequency Characteristic



10.2 Phase Characteristic



11. Mounting and overall dimensions



12. Contact

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