

I took some time for some reverse engineering measurements to give a reasonable answer about the specs of the SUMIDA VHF coils used in different locations in the 60 – 75 MHz circuits in the JRC NRD-515.

Measuring the HF signal with the scope to find out a winding ratio only makes sense if on a certain location there is only ONE frequency available. Otherwise the results are not reliable due to high level mixing products on different frequencies. So do not measure near or after a mixer circuit.

I took the output of IC58 on 70 MHz. Low Z nearby is TP31. Normal operating situation 1.7V_t on my scope at this TP. One probe is fixed to TP31. If I touch C219 on the hot side, the output drops on TP31 to 0.2V_t, due to getting "out of tune" on the primary.

But the input is (touched with a second probe) still 1.6V_t. So the N or U ratio stays 8 to 1. Z ratio must be about 64 to 1.

Secondary is terminated with 68 Ohm (2nd Lo on Rx board), so on the primary it could be max. 4K to 4K5 in Z.

Self build / winding info for the coil.....

The calculated inductance should be about 0.215 to 0.235 uH.

With 70 MHz and 22 to max 24 pF cap - with stray C.

A guess for the windings? 2x 3, 2x 3.5 or even better 2x 4 windings to 1 single winding for the secondary (equals 8 to 1).

A local hobby shop has some 10 mm VHF coils (they probably will NOT fit, but could be re-wound) with the same primary winding number and comparable uH's.

The link to the Kent Electronics hobby shop is removed here due to passing away of the owner.

A screenshot copy:

Part Number	Inductance	Turns	Frequency	Ratio
E526HNA-100076	0.21µH	80	50MHz	6.5t
E526HNA-100077	0.24µH	80	50MHz	7.5t
E526HNA-100078	0.28µH	80	50MHz	8.5t

In case of needed repair this type of transformer (0.24 uH version) probably could be used.....

Or with suitable / comparable other 10 mm VHF coils "in re-wound" mode with locally available transformers from other manufacturers, like TOKO....

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