

500 KC 200 Watt CW / Linear Amplifier
Parts List and Notes
for the ARRL 500 KF Experimental Group
Designed by Ralph Hartwell W5JGV
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version 2.05
>> Preliminary - Not For Release <<

U1 - LM384, NTE862, ECG862 (Small heat sink may be necessary.)

U2 - TC4426

Q1, Q2 - IRFP260

TH-1 - 10 K NTC thermistor mounted against heat sink close to Q1 or Q2.

(Trim the 2600 Ohm resistor to stabilize idle drain when heat sink is hot.

This is probably not necessary.)

T1 - Core #43 material. OD 14mm, ID 10mm, HT 16mm.

Primary 6 turns #26.

MOSFET Secondary 9 turns #26 bifilar wound.

TC4426 driver Secondary 16 turns #26.

Primary Inductance = 41 uHy.

TC4426 Secondary Inductance = nnn uHy.

MOSFET Secondary Inductance = 372 uHy end-to-end.

T2 - core - Powdered iron, salvaged from switching power supply.

Probably #2 or #18 material.

OD 40mm, ID 29mm, HT 15mm.

Ae = 124

Le = 94

Al = 131

Ui = 79

Primary 4 turns #14 PVC insulated bifilar, wound over secondary winding.

Secondary 28 turns #17 enameled, close wound.

Primary inductance = 8.44 uHy end-to-end.

Secondary inductance = 103 uHy.

TO BE ADDED TO FINAL DESIGN:

Metering, E drain, I drain

Low Pass Filtering (may be separate)

Heat sinking and cooling fans

RF Sample port

Stability tests

RFI tests

FCC limit tests

Packaging in case