432 MHz Linear Amplifier
12dB gain WA3JUF 1987

Q1 - SD1458 Class A device
RFC1 - VK200 wideband choke
RFC2,4 - 8t, #20, on red toroid
RFC3 - 3t, #16, 1/4" ID
Cb - .01 + 100pf
50-ohm lines are 0.080" x 1.5"
Matching caps - Unelco metal clad
Trimmers are Arco

422.6 MHz LO or 432 MHz Linear amplifier
WA3JUF 1983
Class-C G=11dB Class-AB G=13dB

Microstrip = 5" total 50-ohm - to fit in BUD box
Q1 - SD1429
Matching caps are Unelco Variables are ARCO

U1 - LM317 regulator
R1,2 - 10ohm 1/2w
R3 - 100-ohm 10-turn pot
R4 - 240-ohm 1/4w
D1 - 1N4001 (on Q1 lid)
C1 - 1ufd tantalum
C2 - .001 ufd

440 MHz HT 10W Amplifier

with T/R switching WA3JUF 1983

D1,4: BA182
1/4 wave line: 6" mini teflon coax
RFC: 0.68uH molded choke
Amp: 2N5946 May 1985 Cheese Bits

D1,2 - 1N4148

10 Watt 432 Mhz. Linear Amplifier

by D. Mascaro, WA3JUF

This amplifier can be used to drive the SD1434 Linear amp. described in an earlier issue of Cheese Bits.

The pc board can be etched or cut with an exacto knife. The lines are not critical at all. A hole is drilled in the board to accept the transistor, which is attached to a suitable heatsink. No artwork was shown for the dc components. This can be added to your board using small pads to mount the components for the bias and collector supply.

The pot is adjusted for an idling current of 25-50 ma. with no drive signal. Then the trimmers and size of L1 are adjusted for max. power out.

Artwork on 1/16" G-10 Double sided Scale 1:1

L1 = 1t, #22, 0.2"d
C1,2,4,5 = 10p Piston
C3 = 24pf chip or mica
RFC1,3 = VK200 choke
RFC2 = 4t, #22, 1/8"d
Q1= SD1146, SD1433 or 2N5946

1N4148 (2) mount diode to ground across Q1 ceramic cap and solder to emitter.

40 Watt 432 Mhz. Linear Amplifier

by Dave Mascaro, WA3JUF

This amplifier uses microstrip circuitry on standard 1/16" G-10 double sided PC board. With the full scale artwork provided, the board can be reproduced using Exacto-etch or a ruby can be made.

Rivets or pcs. of wire are used at all rf and dc grounds as indicated by holes in the artwork. The input and output connections must also be well grounded.

A hole is cut in the board to accept the 1/2" JØ device. The flange is screwed to a suitable heatsink with 4-40 screws with heatsink compound used between the flange and the heatsink.

The four 27pf Unelco capacitors are soldered to the PC board under each of the four emitters of Q1. Solder the emitters close to the cap of Q1 to reduce the inductance of the emitter leads.

The bias is turned on during transmit only. Icq is set at 100-150ma. The bias diode is soldered to a solder lug and mounted under one of the screws holding Q1 to the heatsink. The heatsink is around 3-1/2 X 5" with 1" high fins.

Power out is 30-40 watts with 10-15 watts input @ 14VDC. The B+ is fused @ 7-1/2 to 10 amps.

30-40 WATT
432 CW/SSB

27PF
UNELCOS
IN
ARCO
404
10
27
27
27
27
OUT
15
500
500
10
LM
317
1K POT
270
+12 TX
10UFD
+14V

RF SWITCHING
PREAMP
JUMPER
432
XCVR
K1
K2
AMP
K1, K2 12V COIL
MINATURE DOWKEY
OR BETTER.
+14V
DC SWITCHING
1K
500
TIP32
+8-12V
ON TX
FROM XCVR
2K
(2)
MPS-A13
2N2222A
K1
K2
TO LM317
V INPUT
REV. A
WA3JUF 1984