UR communications ltd.
vancouver, canada

9T95A50 UHF POWER AMPLIFIER SECTION

Specifications:

Power requirements transmit	117 VAC at 1.4 A. typ. for 30 watts 117 VAC at 1.6 A. typ. for 50 watts
Power requirements std. by	117 VAC at 360 mA. typ. 13.6 VDC at 30 mA. typ.
Frequency	406 to 512 MHz
R.F. power input	4 watts typ.
R.F. power output	30 to 50 watts continuously adjustable
Input and output impedance	50 ohms
Spurious, harmonic emission	70 dB below carrier
Hum and Noise	-37 dB from 3.5 KHz. deviation at 1000 Hz.
Exciter	9T90B4
Physical size L X W X H	425 mm. x 483 mm. x 266 mm. (6U)
Weight	25 Kg.

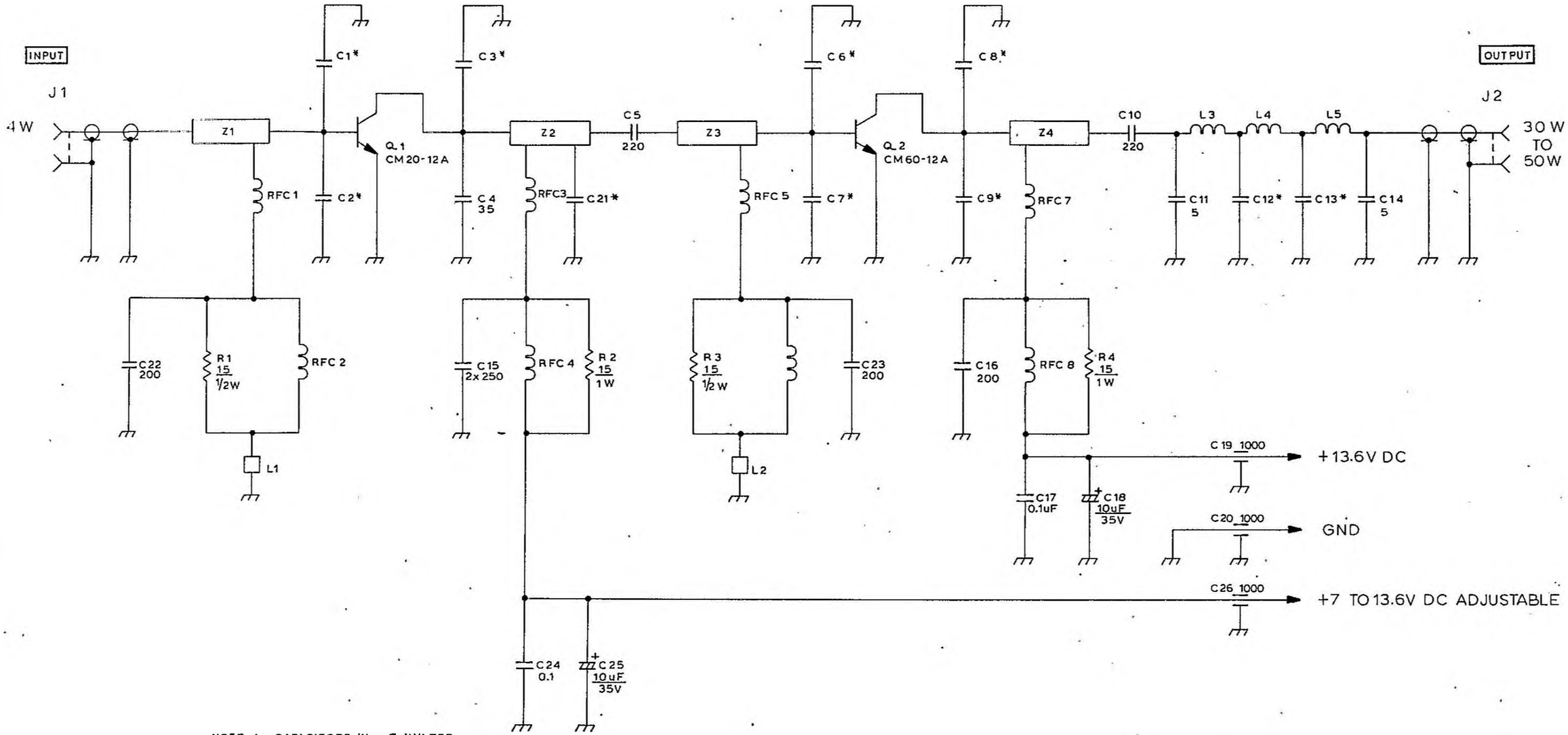
Description:

The 9T95A50 power amplifier section is a rack-mount 30 to 50 watt UHF/FM transmitter designed for semi-continuous service, and operates with the 9T90B4 as an exciter and with MODEL 95 RACK MOUNT P.A. POWER SUPPLY as a power supply. The R.F. power amplifier section and the power supply regulator section are assembled in one piece consisting of heak sinks and guide-rails. It can be pulled out and detached from the rack-mount chassis for quick service. The power supply is assembled on the rack panel and is connected to the regulator section through a four-circuit connector. The R.F. input and output are fed through coaxial connectors on the rear of the heat sink.

Circuit Description:

1. R.F. Power Amplifier

Q1 and Q2 are the driver and power amplifier stages respectively, and are operated in a common emitter configuration. The input and output impedance of each stage is matched to 50 ohms by means of a quarter wave microstripline which provides broadband operation without tuning. The R.F. power is fed to J2 through a low pass filter, C11, C12, C13, C14, L3, L4, and L5.



NOTE 1: CAPACITORS IN pF UNLESS OTHERWISE SPECIFIED.

2: Z1 TO Z4 ARE 50 OHM 1/4 WAVE MICROSTRIPLINES.

3: RF POWER OUTPUT IS CONTINUOSLY ADJUSTABLE FROM 30 WATTS TO 50 WATTS BY CHANGING SUPPLY VOLTAGE FROM 10.0 VOLTS TO 13.6 VOLTS RESPECTIVELY.

* REFER TO PARTS LIST

SUFFIX	FREQUENCY	C1	C2	C3	C6	C7	C8	C9	C12	C13	C21
A	406~ 420 MHz	25	25	35	40	40	40	35	15	15	5
B	450~ 470 MHz	20	25	30	35	35	35	35	15	15	/
C	470~ 512 MHz	20	20	30	30	35	30	30	10	10	/

REV	DATE	DESCRIPTION	DRN	CHKD	APPVD
E	May 15,79	ADJUSTABLE DC SUPPLY TO Q1	Sid	J.M	
D	May 15,79	C15 CHANGED FROM 200 TO 2x 250	Sid	J.M	
C	May 15,79	C 21,22,23,24,25,26 ADDED	Sid	J.M	
B	May 15,79	C4 CHANGED FROM 31 TO 35	Sid	J.M	
A	May 15,79	SEE FREQ. CHART FOR COMPONENT VALUE	Sid	J.M	

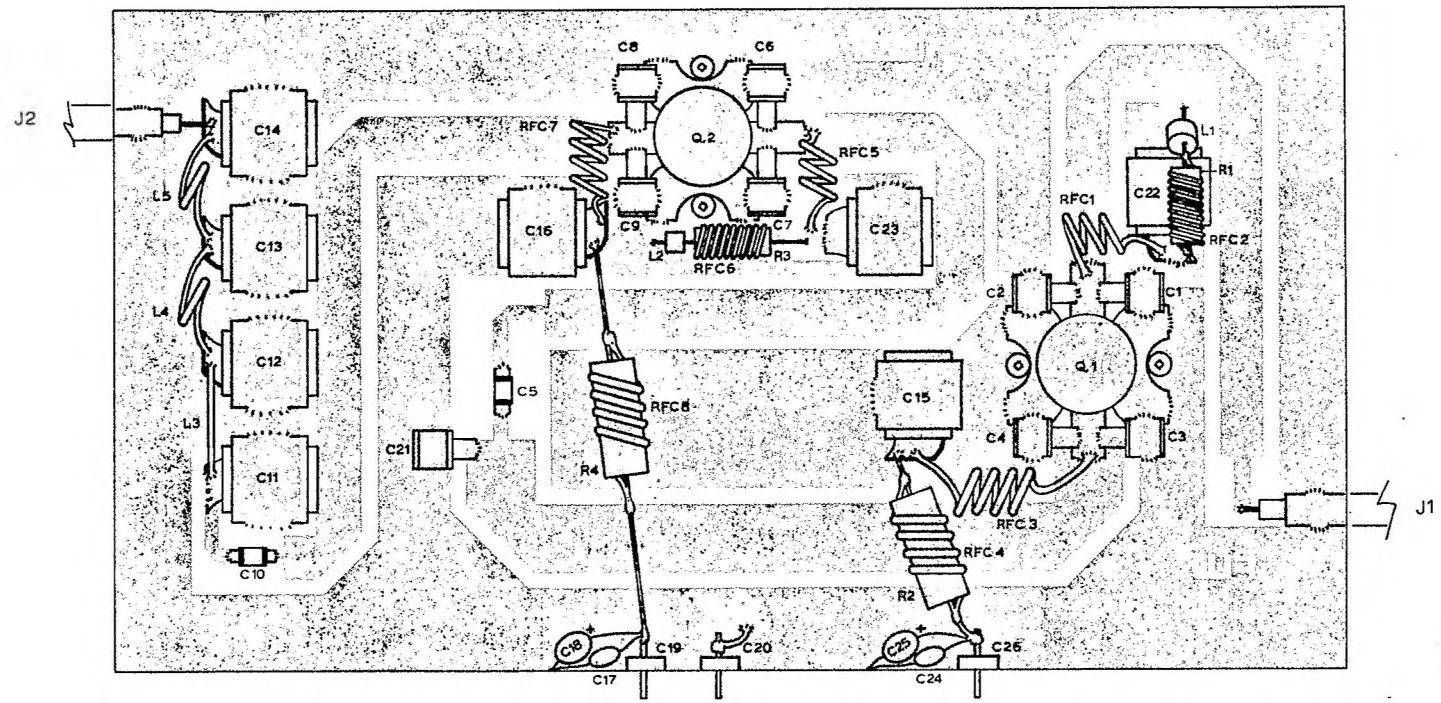
WESTERN RADIO SERVICES LTD.

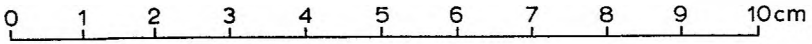
VANCOUVER B.C., CANADA

TITLE: 9T95A50
POWER AMPLIFIER SECTION
SCHEMATIC DIAGRAM

DRAWN Sandra.	DATE MAY 15, 1979.	DRAWING NUMBER
CHECKED J.M	SCALE	42-2
APPROVED		

VIEW FROM COMPONENT SIDE





REV	DATE	DESCRIPTION	DRN	CHKD	APPVD

communications ltd. vancouver, b.c., canada

TITLE: 9T90B4 / 9T95A50
POWER AMPLIFIER SECTION
P.C. ASSEMBLY

DRAWN	DATE AUG.7, 1980.	DRAWING NUMBER
CHECKED	SCALE	42-3
APPROVED		