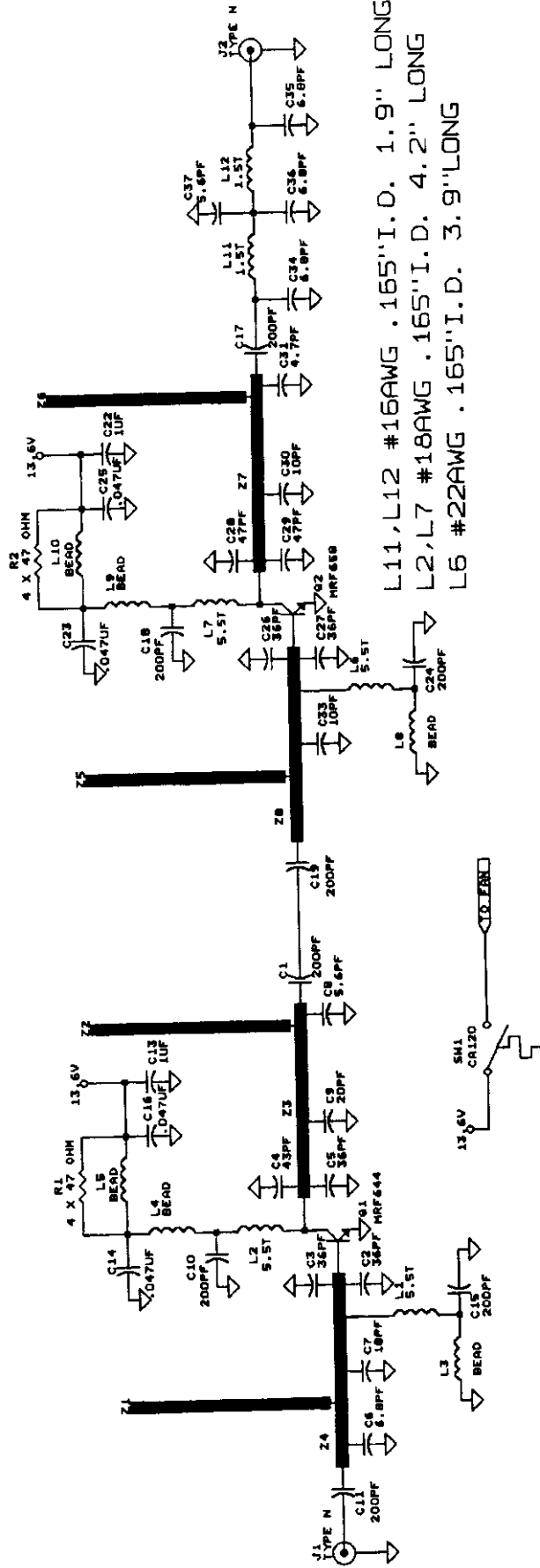


EXHIBIT 4
SCHEMATICS

The UHF 450-70 Series power amplifier is a self-contained rack mountable unit capable of up to 70 watts of class c output power, with built in cooling circuitry. The input signal is amplified by the driver transistor capable of producing 25 watts. This signal is amplified by the final transistor and then filtered by a five element low pass filter. A thermostat controls the fan, becoming active when the heatsink exceeds 120F.

CIRCUIT DESCRIPTIONS



L11, L12 #16AWG .165" I.D. 1.9" LONG
 L2, L7 #18AWG .165" I.D. 4.2" LONG
 L6 #22AWG .165" I.D. 3.9" LONG

NOT USED

C12, C20, C21, C32

1.4" BUSS FROM FUSE TO CA120
 1.4" BUSS FROM FUSE TO VCC BOARD #2
 Ø.9" BUSS FROM FEEDTHRU TO FUSE
 Ø.9" BUSS FROM FRAME GND TO GND (CA120)
 4.0" #16AWG FROM FUSE TO VCC BOARD #1

1.25" #16AWG
 2.75" #16AWG
 (2) 3.2" COAX
 (5) GND LUGS
 (6) #4-40 X 1/4" SLOT SCREWS

EMR Corp.
 22402 N. 19th Avenue
 Phoenix, Arizona 85027
 ENGINEER: Steven Matacia

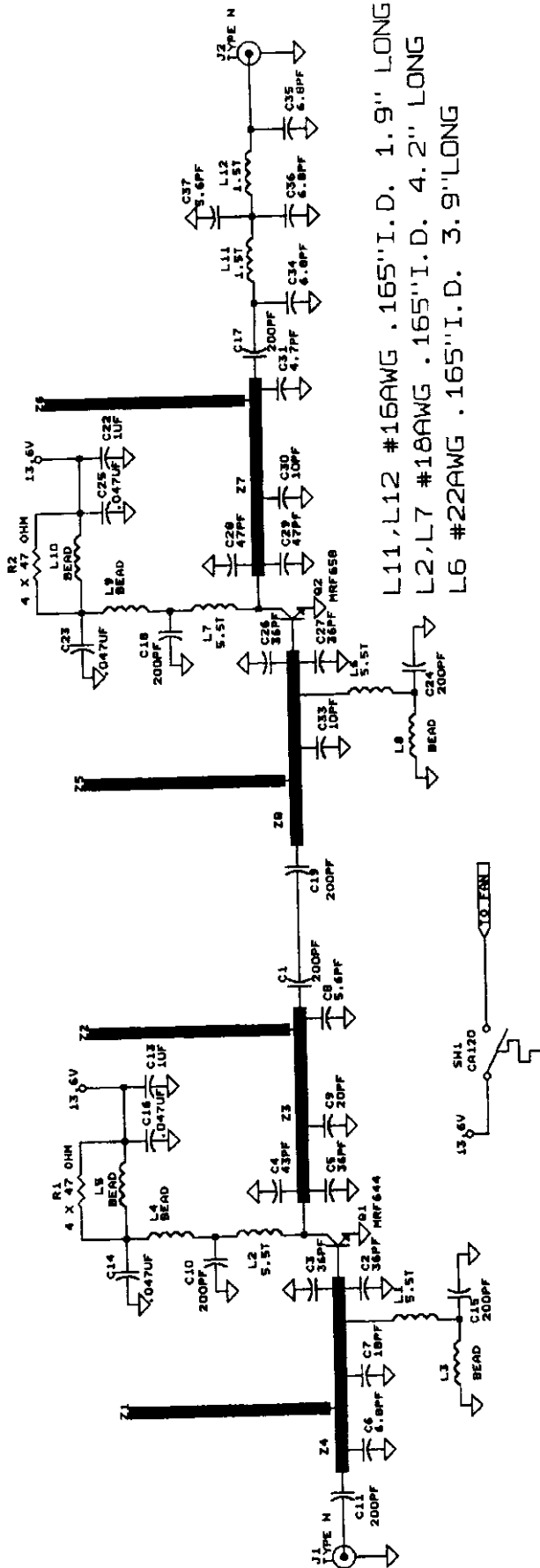
TITLE: 70 WATT POWER AMP
 450-490 MHZ

DOCUMENT #

SIZE: B
 REV: B

DATE: MAY 1, 1998
 SHEET: 1 of 1

SCHEMATICS Table B



L11, L12 #16AWG .165" I.D. 1.9" LONG
 L2, L7 #18AWG .165" I.D. 4.2" LONG
 L6 #22AWG .165" I.D. 3.9" LONG

NOT USED

C12, C20, C21, C32

- 1.4" BUSS FROM FUSE TO CA120
- 1.4" BUSS FROM FUSE TO VCC BOARD #2
- 0.9" BUSS FROM FEEDTHRU TO FUSE
- 0.9" BUSS FROM FRAME GND TO GND (CA120)
- 4.0" #16AWG FROM FUSE TO VCC BOARD #1

- 1.25" #16AWG
- 2.75" #16AWG
- (2) 3.2" COAX
- (5) GND LUGS
- (6) #4-40 X 1/4" SLOT SCREWS

EMR Corp.
 22402 N. 19th Avenue
 Phoenix, Arizona 85027
 ENGINEER: Steven Matacia

TITLE: 70 WATT POWER AMP
 450-490 MHz

DOCUMENT #

REV: B

DATE: MAY 1, 1998
 SHEET: 1 of 1

SCHHEMATICS Table B