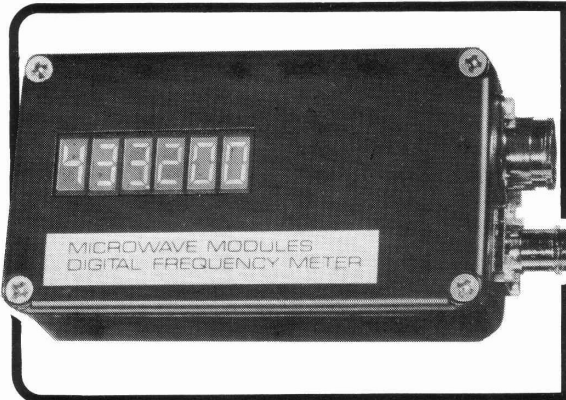




MICROWAVE MODULES LTD

500 MHz DIGITAL FREQUENCY METER MMD050/500



FEATURES

- ★ 12 volt DC operation
- ★ 0.45-500 MHz coverage in two ranges
- ★ 100 Hz resolution on 50 MHz range
- ★ 1 KHz resolution on 500 MHz range
- ★ Reverse Polarity Protected

SPECIFICATION

Digit Height	:	10mm
Display Width	:	45 mm
Case Size	:	111 x 60 x 27 mm
Frequency Ranges	:	0.45-50 MHz 50-500 MHz
Sensitivity	:	Better than 50 mV RMS over 0.45-50 MHz Better than 200 mV RMS over 50-500 MHz
Input Connector	:	50 ohm BNC
Input Impedance	:	50 ohm
Power Connector	:	5 pin 270° locking DIN socket
Power Requirements	:	11-15 volts DC at 300 mA approximately

DESCRIPTION

Recent advances in MOS technology have made possible the development of this extremely compact frequency meter which for the first time offers the user a convenient cost-effective means of frequency measurement.

A close tolerance quartz crystal in the 5 MHz range together with CMOS binary divider integrated circuits generate the accurate 400 mS gating period for the main counter MOS LSI circuitry.

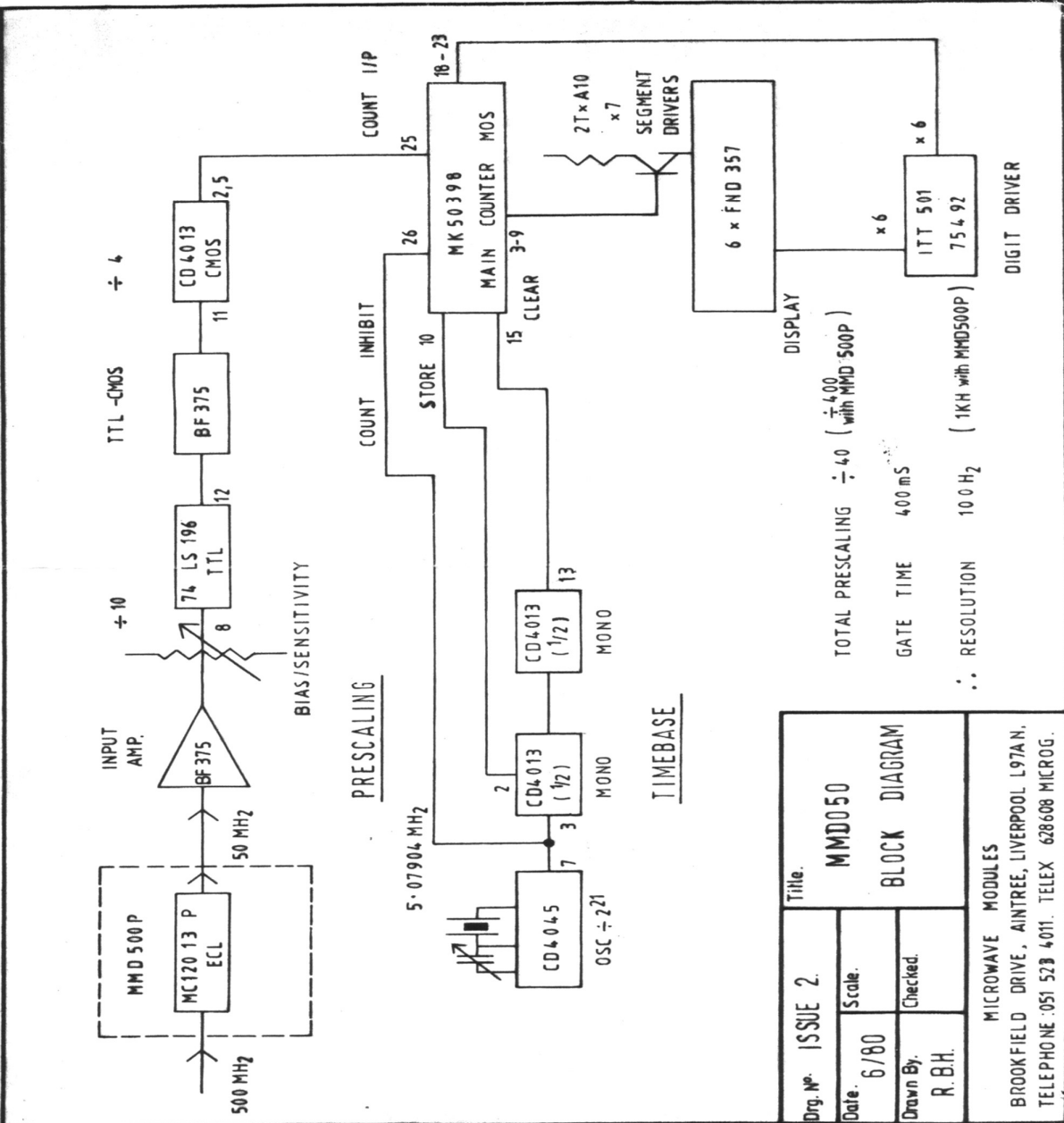
This LSI circuitry drives a multiplexed 6 digit LED display through current amplifiers. This display is fed from an internal store which is constantly updated from the main counter register and thus the display is continuous and flicker-free for a constant frequency reading. The display uses the latest high efficiency red LED's with a digit height of 10mm and overall display width of 45mm.

This counter has two ranges which are selected by supplying +12 volts to one of two pins on the DIN socket. Internal diode switching brings the input in the 0.45-50 MHz range to a wide-band amplifier which drives a high speed TTL divider in the main counter logic. On the 50-500 MHz range the diodes switch in a high speed ECL prescaler and the decimal point is changed accordingly.

A low angle AT cut quartz crystal is used giving a typical temperature stability of 0.5 ppm per degree C. Provision is made for setting the crystal frequency, and the accuracy of reading is normally better than 200 Hz at 50 MHz., or 2 KHz at 500 MHz.

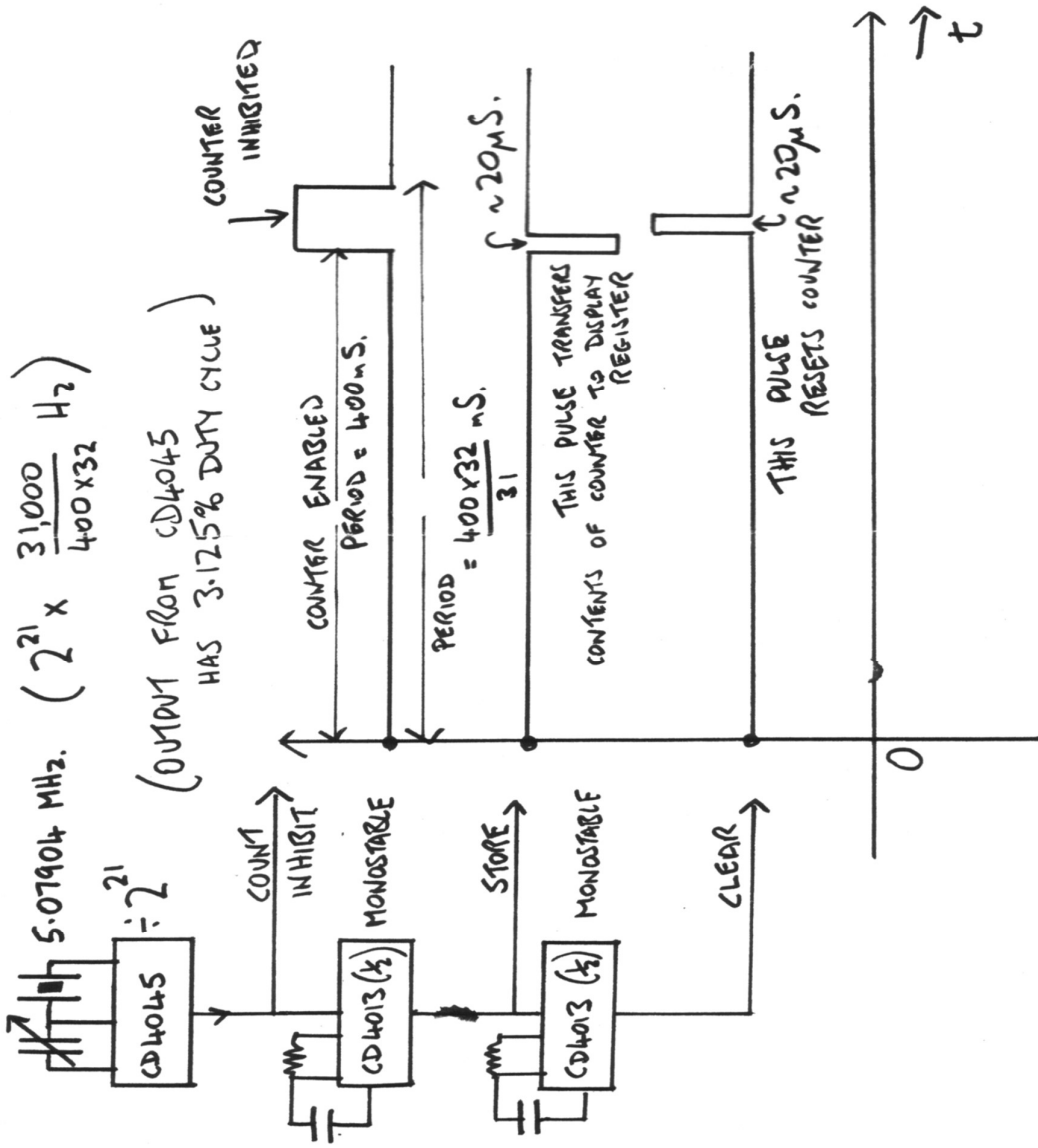
The counter has reverse polarity protection and operates satisfactorily from a nominal 12 V DC supply. A suitable 5 pin DIN plug is supplied.

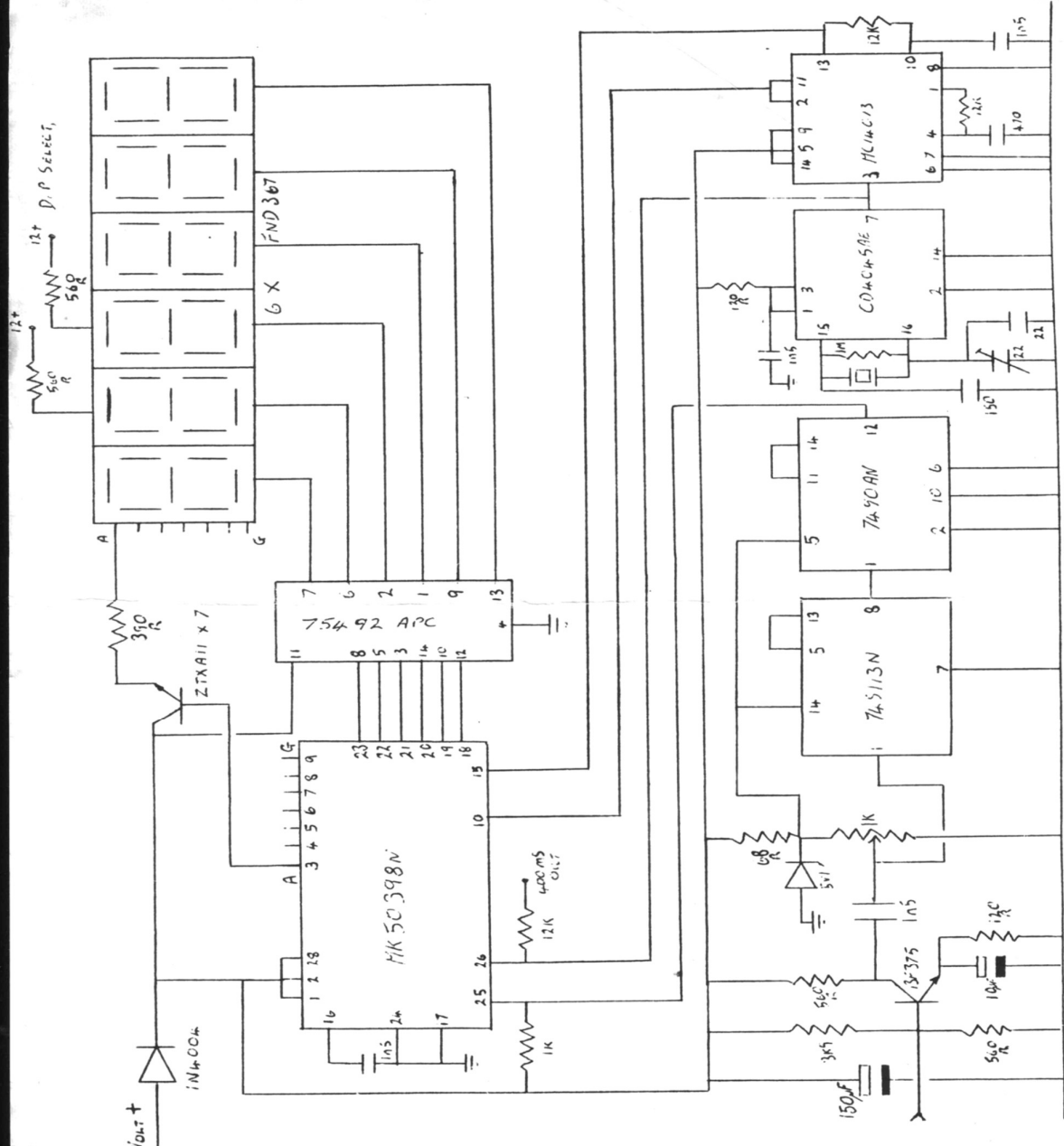
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Dwg. No. ISSUE 2 Date 6/80 Drawn By. R. B.H.	Title. MMD050 BLOCK DIAGRAM
MICROWAVE MODULES BROOKFIELD DRIVE, AINTREE, LIVERPOOL L97AN, TELEPHONE :051 528 4011. TELEX 628608 MICROG.	

MMD050 - TIMING DIAGRAM





MIP 050/500 CIRCUIT DIAGRAM

Drawn 8-1-80