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NANOSECOND WAVEFORM ELECTRONICS

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INSTRUCTIONS

MODEL AVC-V PULSE GENERATOR

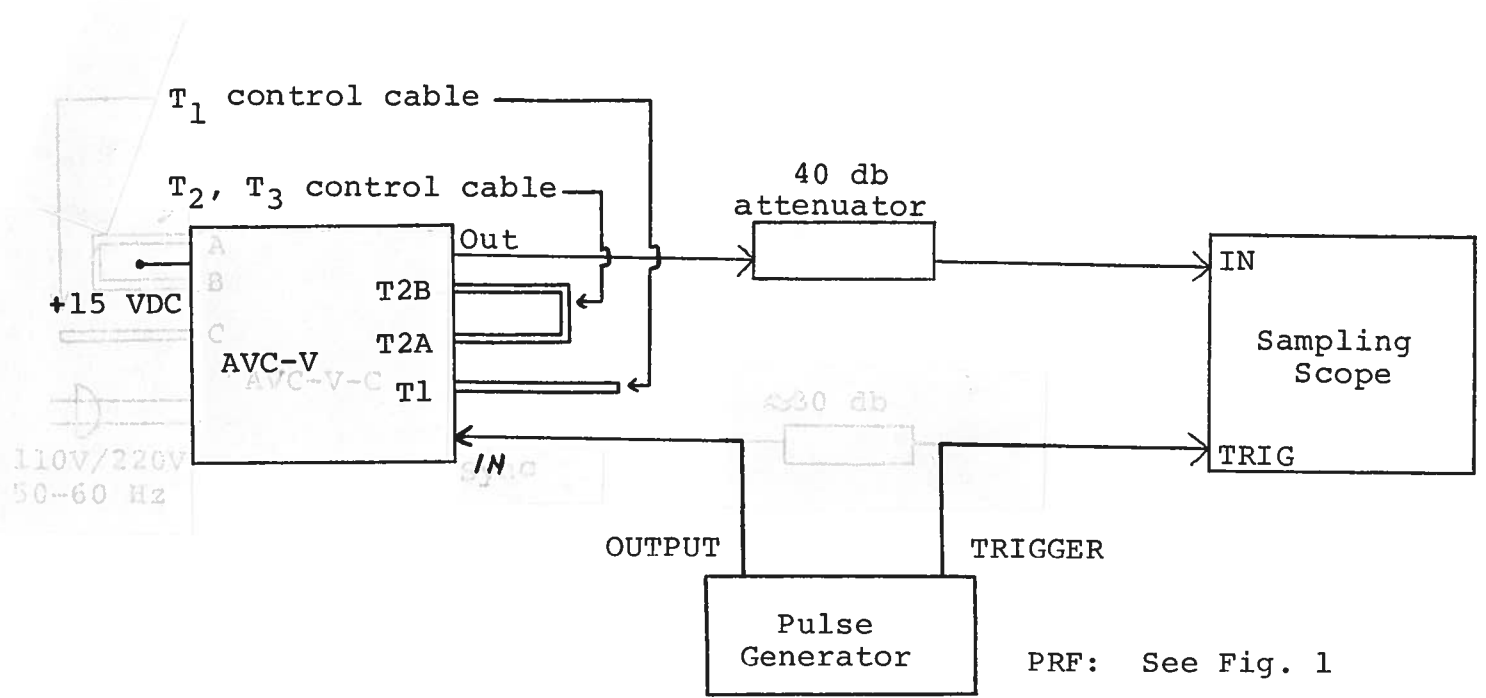
S.N.:

### WARRANTY

Avtech Electrosystems Ltd. warrants products of its manufacture to be free from defects in material and workmanship under conditions of normal use. If, within one year after delivery to the original owner, and after prepaid return by the original owner, this Avtech product is found to be defective, Avtech shall at its option repair or replace said defective item. This warranty does not apply to units which have been disassembled, modified or subjected to conditions exceeding the applicable specifications or ratings. This warranty is the extent of the obligation or liability assumed by Avtech with respect to this product and no other warranty or guarantee is either expressed or implied.

Fig. 1

PULSE GENERATOR TEST ARRANGEMENT



PRF: See Fig. 1  
PW: 0.1 to 1.0 usec  
AMP: +2 to +5 volts  
(TTL)

Notes:

- 1) The bandwidth capability of components and instruments used to display the pulse generator output signal (attenuators, cables, connectors, etc.) should exceed one gigahertz.
- 2) The use of 40 db attenuator at the sampling scope vertical input channel will insure a peak input signal to the sampling scope of less than one volt.
- 3) The maximum allowable PRF and the pulse width  $T_1$  are related as shown in Fig. 1. It is to be noted that for  $T_1$  set at the minimum value, the PRF may be extended to 1 MHz while for  $T_1$  set at the maximum value, the PRF must not exceed 100 KHz.
- 4) The time  $T_1$  is controlled by the length of open circuited coaxial cable connected to port  $T_1$  (See Fig. 2) while  $T_2$  is controlled by the length of miniature coaxial cable connected between ports  $T2A$  and  $T2B$  (see Fig. 3). It is recommended that  $T_1$  be set to the minimum value and  $T_2$  then adjusted to the desired end value by adjusting the cable length. Finally,  $T_1$  is then increased to reduce  $T_2$  to zero. The cable may be fabricated from RG 174 cable.
- 5) To DC offset the output pulse connect a DC power supply set to required DC offset value to the back panel terminals marked D.S. The maximum attainable DC offset voltage is  $\pm 50$  volts. (option).
- 6) The monocycle generator can withstand an infinite VSWR on the output port.
- 7) The +15 volt supply should be removed when changing cables. Note that the center conductor at Port  $T_1$  is at a DC potential of +125 volts.

PRF (mm Hg)

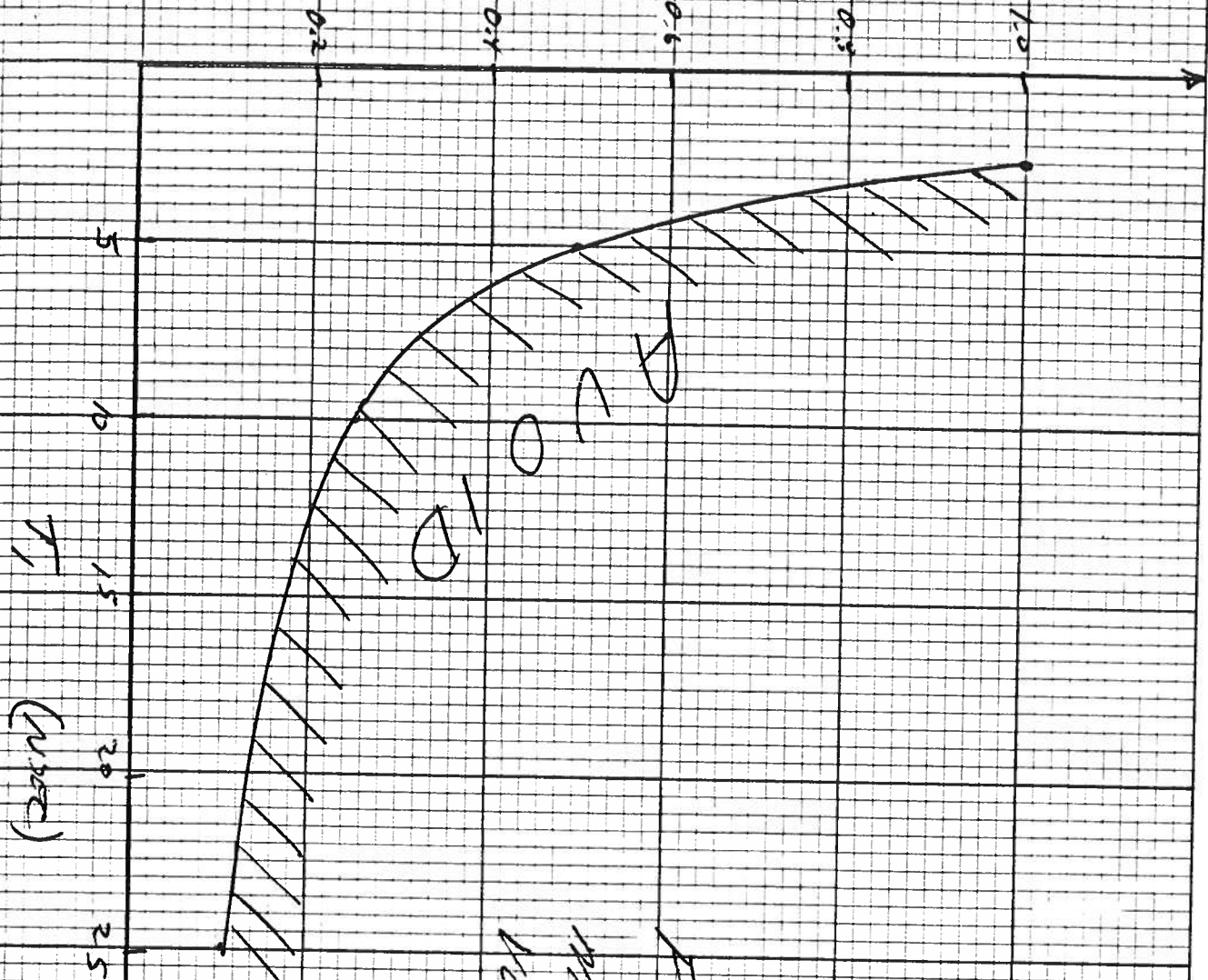
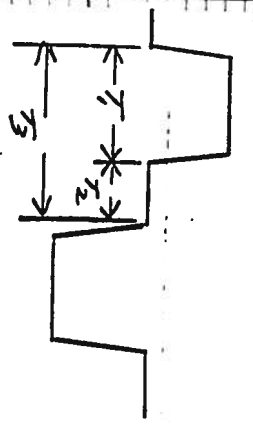
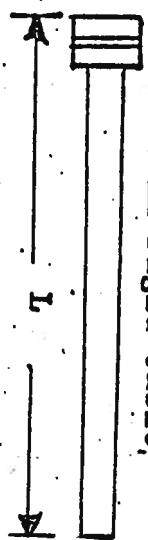
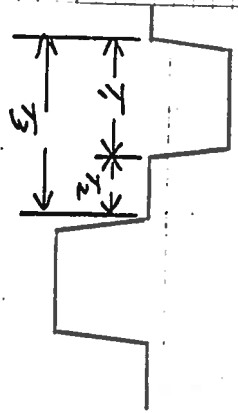


Fig 1:  
 max allowable PRF  
 versus  $T_1$





RG 174 or 85 m11  
semi-rigid cable.

C PORT CABLE LENGTH  
(CM)

50 100 150 200

5

10

15

20

25

7.1

(NUSC)

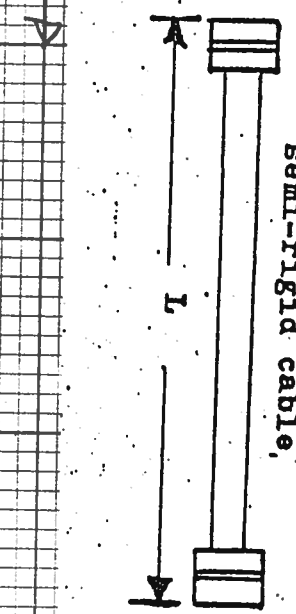
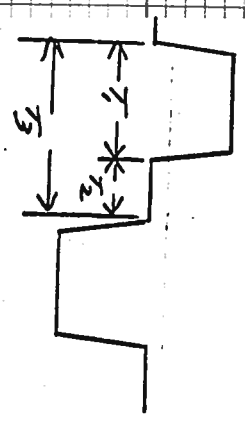
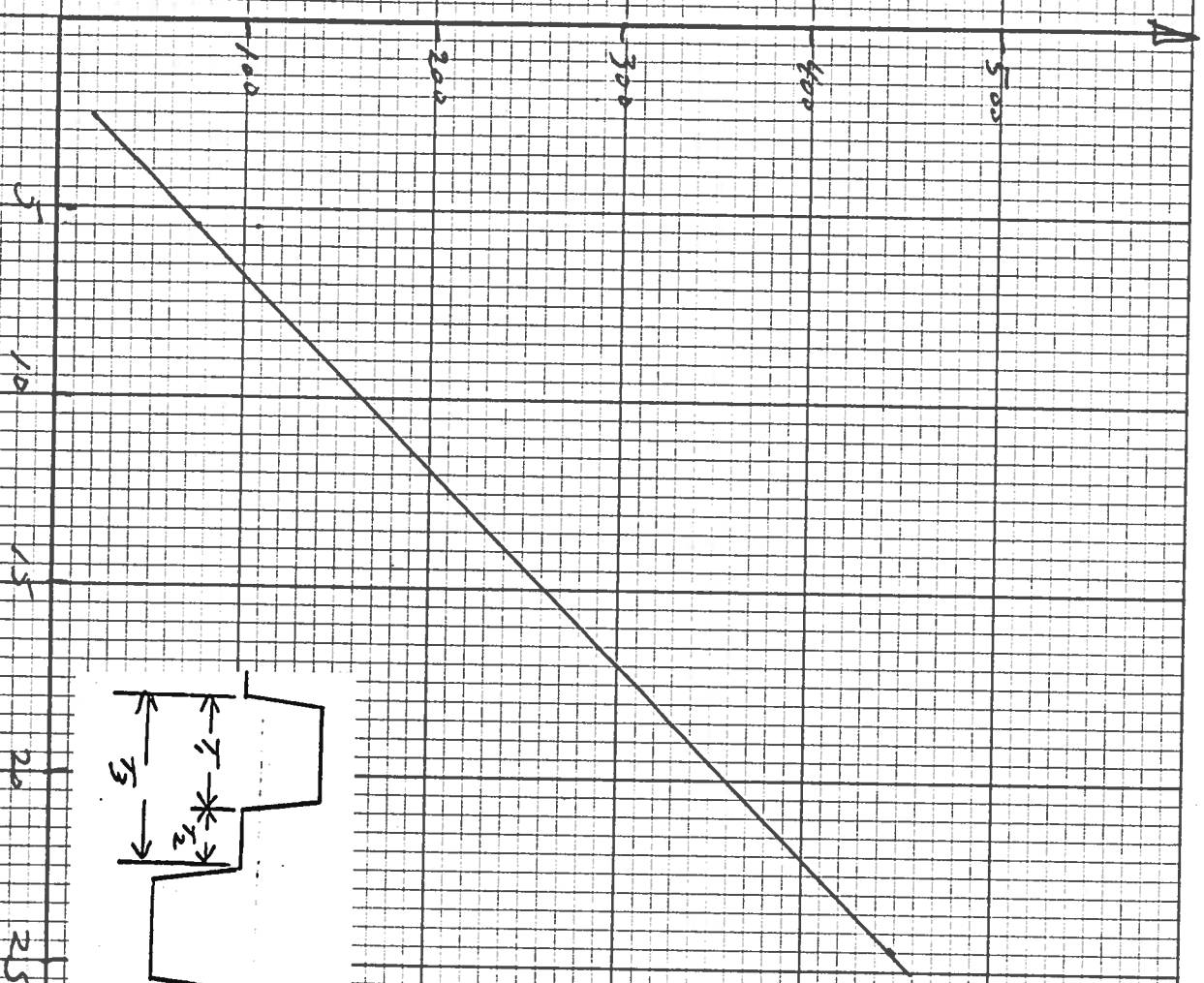
FIG. 2

OUTPUT PULSE WIDTH VS CABLE LENGTH

S.N:

50 ohm 0.085 in semi rigid or RG 174

A-B PORT CABLE LENGTH  
(cm)



RG 174 or 85 mil  
semi-rigid cable,

PLEASE WITHIN 73  
VARIAS PORT A-B  
CABLE LENGTH

FIG 3:

PORT LENGTH

