AVTECH ELECTROSYSTEMS LTD.
NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

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OTTAWA, ONTARIO
CANADA K2C 3H4
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INSTRUCTIONS

MODEL AVM-3-PS-P-LBNL1 PULSE GENERATOR

S.N.:

WARRANTY

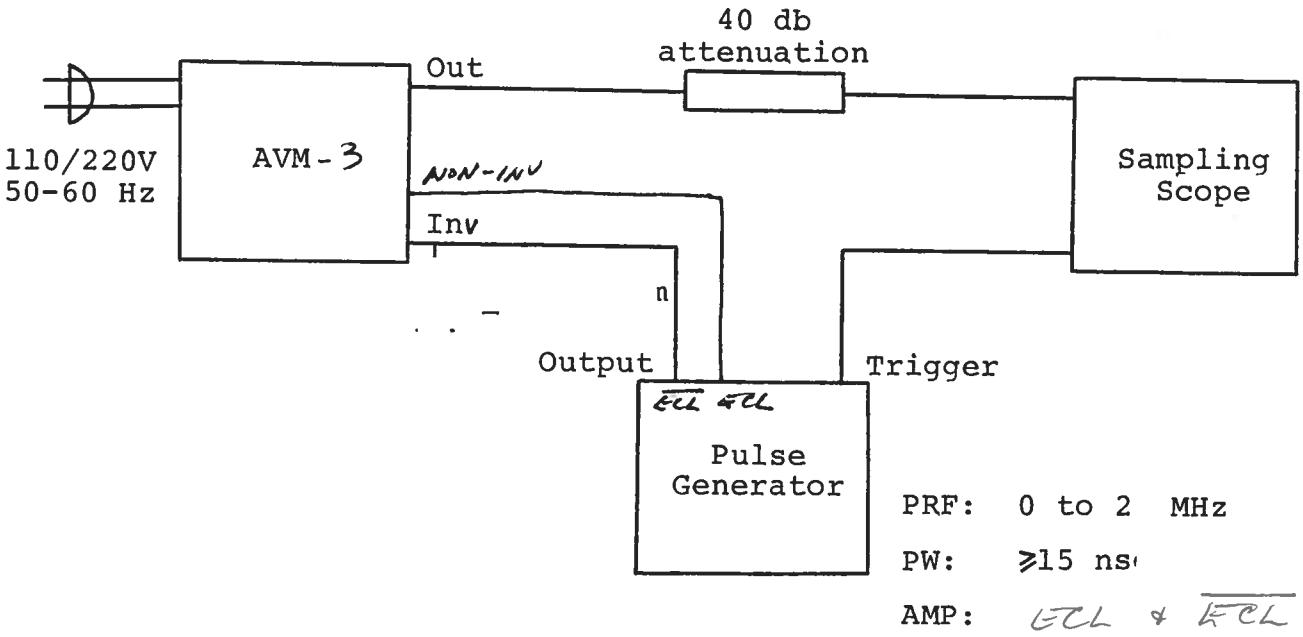
Avtech Electrosystems Ltd. warrants products of its manufacture to be free from defects in material and workmanship under conditions of normal use. If, within one year after delivery to the original owner, and after prepaid return by the original owner, this Avtech product is found to be defective, Avtech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

TECHNICAL SUPPORT

Phone: 613-226-5772 or 1-800-265-6681
Fax: 613-226-2802 or 1-800-561-1970

E-mail: info@avtechpulse.com
World Wide Web: http://www.avtechpulse.com

MODEL AVM-PS PULSE GENERATOR TEST ARRANGEMENT



Notes:

1) The bandwidth capability of components and instruments used to display the pulse generator output signal (attenuators, cables, connectors, etc.) should exceed ten gigahertz.

2) The use of 40 db attenuator will insure a peak input signal to the sampling scope of less than one volt.

3) The input circuit is a MC10125, shunted by 50 Ohms to -2 Volts.

4) The input trigger pulse width should be greater than 15 nsec and less than one half of the pulse repetition frequency period. The unit triggers on the leading edge of the input trigger signal.

5) The output pulse width is controlled by means of the one-turn potentiometer (PW). The pot should initially be set maximum clockwise and the pulse width adjusted using an oscilloscope.

6) The output pulse amplitude is controlled by means of the one-turn potentiometer (AMP). The pulse width may change by several nanoseconds as the output amplitude is reduced from maximum to minimum. Therefore it is convenient to first set the desired amplitude and then set the desired pulse width. Rotation of the PW pot causes the position of the falling edge of the pulse to change.

7) Some properties of the output pulse may change as a function of the amplitude pot setting. For some demanding applications, it may be desirable to use a combination of external attenuators and the amplitude pot to achieve the desired output amplitude.

8) <u>WARNING</u>: Model AVM-PS may fail if triggered at a PRF greater than 2.0 MHz.

9) The Model AVM-PS pulse generator can withstand an infinite VSWR on the output port.

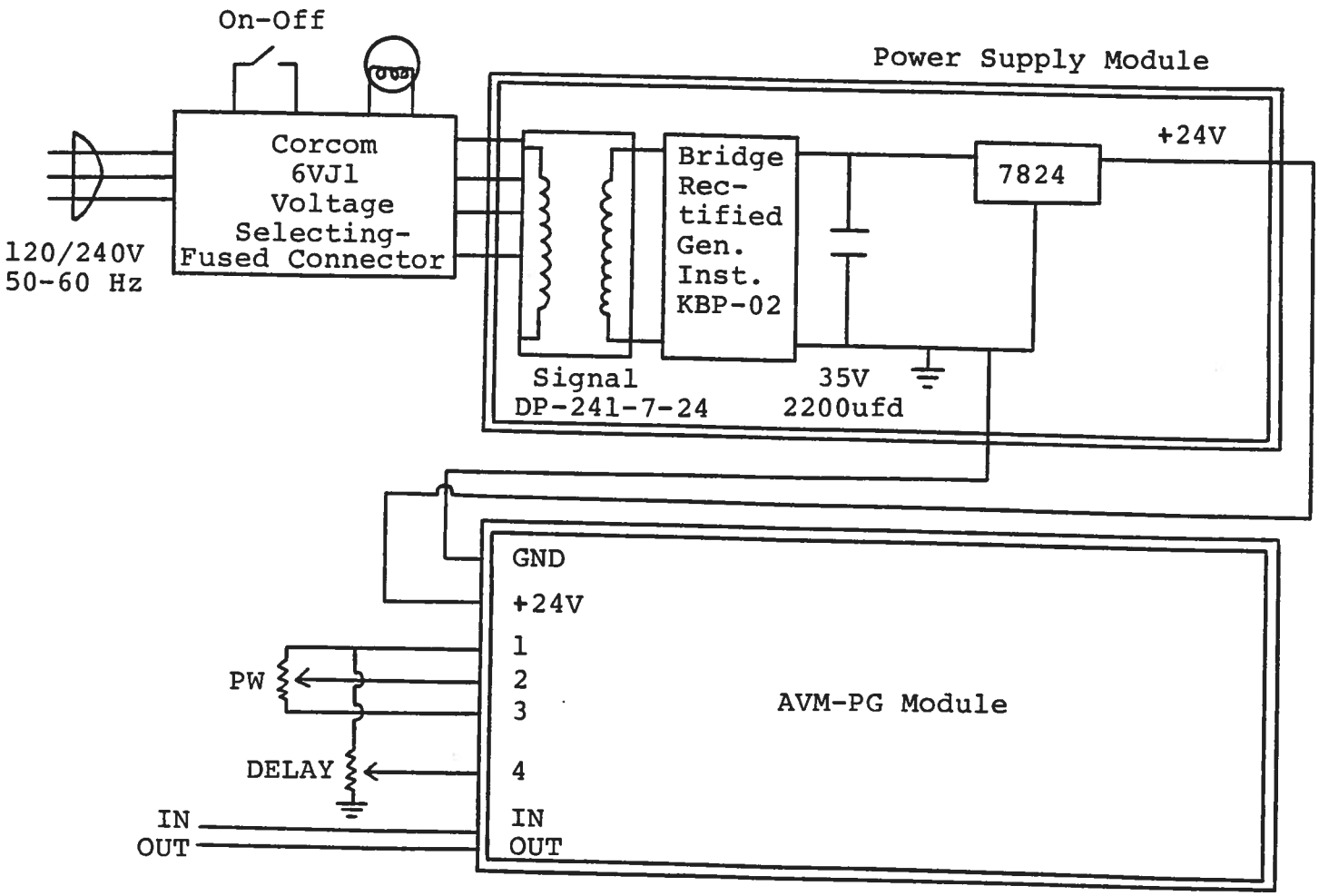
10) The output pulse may be offset by applying the desired DC level to the rear panel OS terminals (± 50 Volts, 100 mA max).

11) The unit can be converted from 110 to 220V 50-60 Hz operation by adjusting the voltage selector card in the rear panel fused voltage selector cable connector assembly.

12) For additional assistance:

Tel: (613) 226-5772
Fax: (613) 226-2802

SYSTEM BLOCK DIAGRAM AND REPAIR PROCEDURE



SYSTEM DESCRIPTION AND REPAIR PROCEDURE

The AVM-2-PS consists of a pulse generator module (AVM-2-PS-PG) and a power supply board which supplies +24 volts (600 mA max) to the pulse generator module. In the even that the AVM-PS unit malfunctions, remove the instrument cover by removing the four Phillips screws on the back of the unit. The top lid may then be slid off. Measure the voltage at the +24V pin of the PG module. If this voltage is substantially less than +24 volts, unsolder the line connecting the power supply and PG modules and connect 50 ohm 10 W load to the PS output. The voltage across this load should be about +24 V DC. If this voltage is substantially less than 24 volts the PS module is defective and should be repaired or replaced. If the voltage across the resistor is near 24 volts, then the PG module should be replaced or repaired. The sealed PG module must be returned to Avtech for repair (or replacement).

8180

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Fax Ref No: 1778 From: Avtech Electrosystems Ltd.

To: Lawrence Berkeley National Laboratory Our Fax No: (613) 226-2802

Date: August 6, 1997

Attn: Jim Hinkson Receivers Fax No: 510-486-5775

Tel: 510-486-4194

Subject: Quotation No. of pages: 4

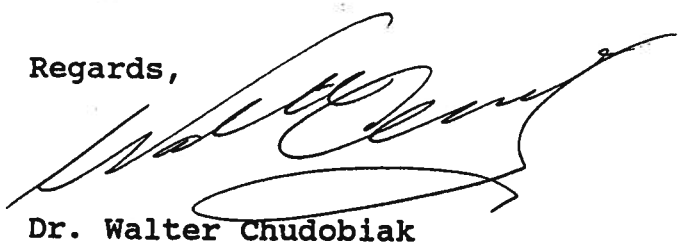
Following your e-mail request of August 5th, we are pleased to quote as follows:

Model designation:	AVM-3-P-PS-LBNL1.
Amplitude:	0 to +10 volts (to 50 Ohms) (one turn control).
PW:	1 to 5 ns (one turn control).
Rise time:	≤ 200 ps (10 - 90%).
Fall time:	≤ 350 ps (10 - 90%).
Input trigger:	Differential ECL.
PRF:	0 to 1.6 MHz.
Other:	See standard AVM-3-PS, Catalog No. 9.
Price:	$2,995.00 US each, FOB destination.
Delivery:	60 days ARO.

Unfortunately, we can not provide a unit with a 200 ps fall time.

Thank you for your interest in our products. Please do not hesitate to call me (1-800-265-6681) if you require any additional information.

Regards,



Dr. Walter Chudobiak
Chief Engineer

WC:my

PULSE GENERATORS (AVM SERIES)

AVM-1-C		3405
AVM-1-PS		2795
AVM-1		2246
AVM-2-C		3405
AVM-2-PS		2795
AVM-2		2246
AVM-3-C		2795
AVM-3-PS		2184
AVM-3		1636
-PN	Dual polarity option	568
-D	Delay option	294
-M	Monitor option	294
-OT	Internally generated offset option, one turn control	588
-EA	Electronic Amp option	368
-EW	Electronic PW option	368
-ED	Electronic Delay option	368
-EO	Internally generated offset option, electronic control	735

February 13/98

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