AVTECH ELECTROSYSTEMS LTD.
NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

P.O. BOX 265
OGDENSBURG, NY
U.S.A. 13669-0265
TEL: (315) 472-5270
FAX: (613) 226-2802

TEL: 1-800-265-6681
FAX: 1-800-561-1970
U.S.A. & CANADA

e-mail: info@avtechpulse.com

BOX 5120 STN. F
OTTAWA, ONTARIO
CANADA K2C 3H4
TEL: (613) 226-5772
FAX: (613) 226-2802

INSTRUCTIONS

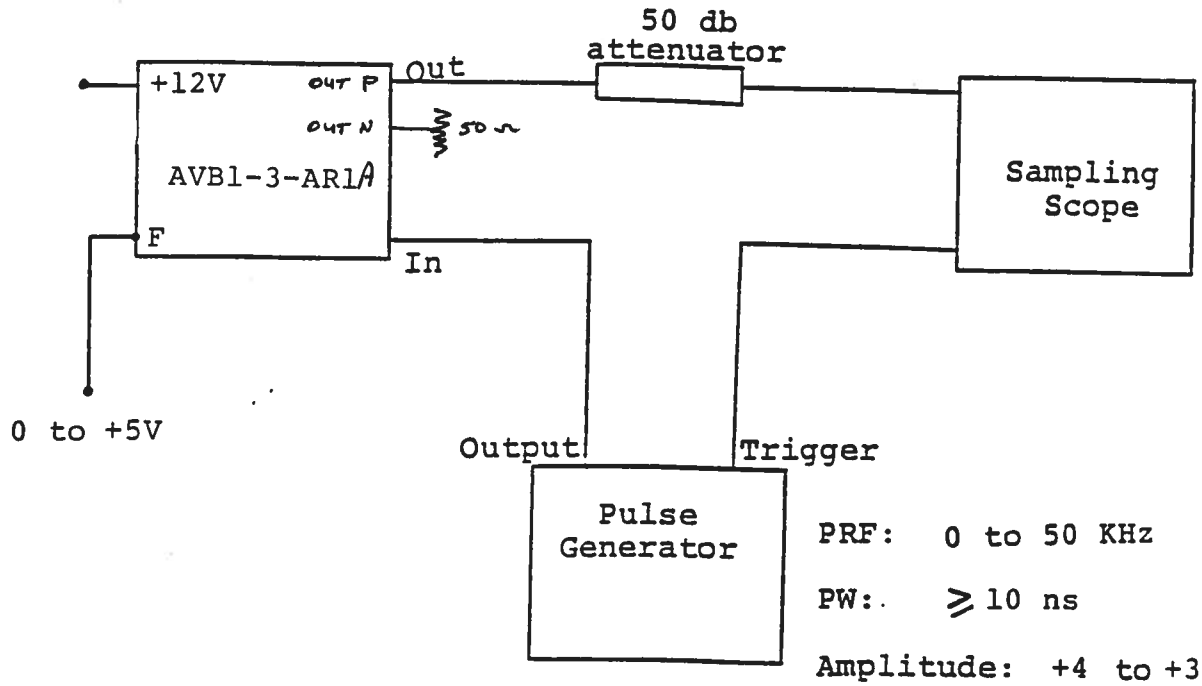
MODEL AVB1-3-AR1A MONOCYCLE GENERATOR

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 or liability assumed by Avtech with respect to this product and no other warranty or guarantee is either expressed or implied.

MONOCYCLE GENERATOR TEST ARRANGEMENT



PRF: 0 to 50 KHz

PW: $\geq$ 10 ns

Amplitude: +4 to +30 volts

Note that input contains series 250 volt DC blocking capacitor

Notes:

1) The bandwidth capability of components and instruments used to display the monocycle generator output signal (attenuators, cables, connectors, etc.) should exceed 10 GHz.

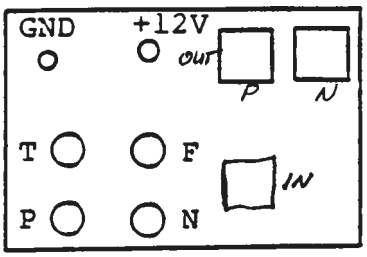
2) The use of a 50 dB attenuator will insure a peak input signal to the sampling scope of less than one Volt.

3) In general, the pulse generator delay control should be set in the 100 ns range. Other settings should be as shown in the above diagram. The monocycle generator output is delayed with respect to the trigger input signal by about 30 ns (typically).

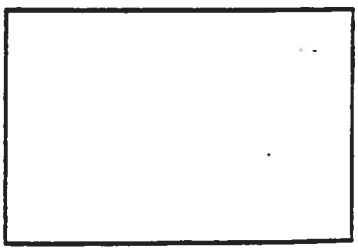
4) The monocycle generator can withstand an infinite VSWR on the output port.

5) The output frequency is approx. 1000 MHz when 0 V is applied to the F solder terminal and 500 MHz when +5V is applied to the F solder terminal ($R_{IN} \geq 10K$). Note that the frequency may be continuously varied from 500 to 1000 MHz by varying the voltage from 5 to 0 Volts (see enclosed waveform sketch).

6) The P and N pots are for minor adjustments to the widths of the positive and negative voltage swings. Clockwise rotation of the pots increases the widths. The T pot is for minor adjustment to the separation of the positive and negative swings (when in 500 MHz mode only). Clockwise rotation of the pot increases the separation. At time of shipping the pots were adjusted for 500 and 1000 MHz operation.



FRONT VIEW



REAR VIEW

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FAX: (613) 226-2802

Fax Ref No: 962

From: Avtech Electrosystems Ltd.

To: Applied Research

Our Fax No: (613) 226-2802

Tel: 802-763-8348

Date: November 4, 1996

Attn: Rex Morey

Receivers Fax No: 802-763-8283

Subject: 500-1000 MHz Monocycle Generator

No. of pages: 3

As per our telephone conversation of November 1st, I am pleased to provide a price and delivery quotation for a special purpose monocycle generator meeting the following specifications:

Model designation:	AVB1-3-AR1A (positive and negative out version of Model AVB1-3-AR1, see enclosed sketch).
Output frequency:	500 MHz to 1000 MHz (continuously variable). Output frequency controlled by potential (0 to +5 Volts) applied to solder terminal ($R_{IN} \approx 2.2K$).
Output amplitude: (to 50 Ohms)	≥ +35 Volts 0 to peak and ≥ -35 Volts 0 to peak (see enclosed sketch).
PRF:	0 to 50 kHz. Equals input trigger PRF.
Trigger:	+4 to +30 Volts; PW ≥ 10 ns.
Propagation delay:	≈ 40 ns.
Output spurious level:	≤ 26 dB.

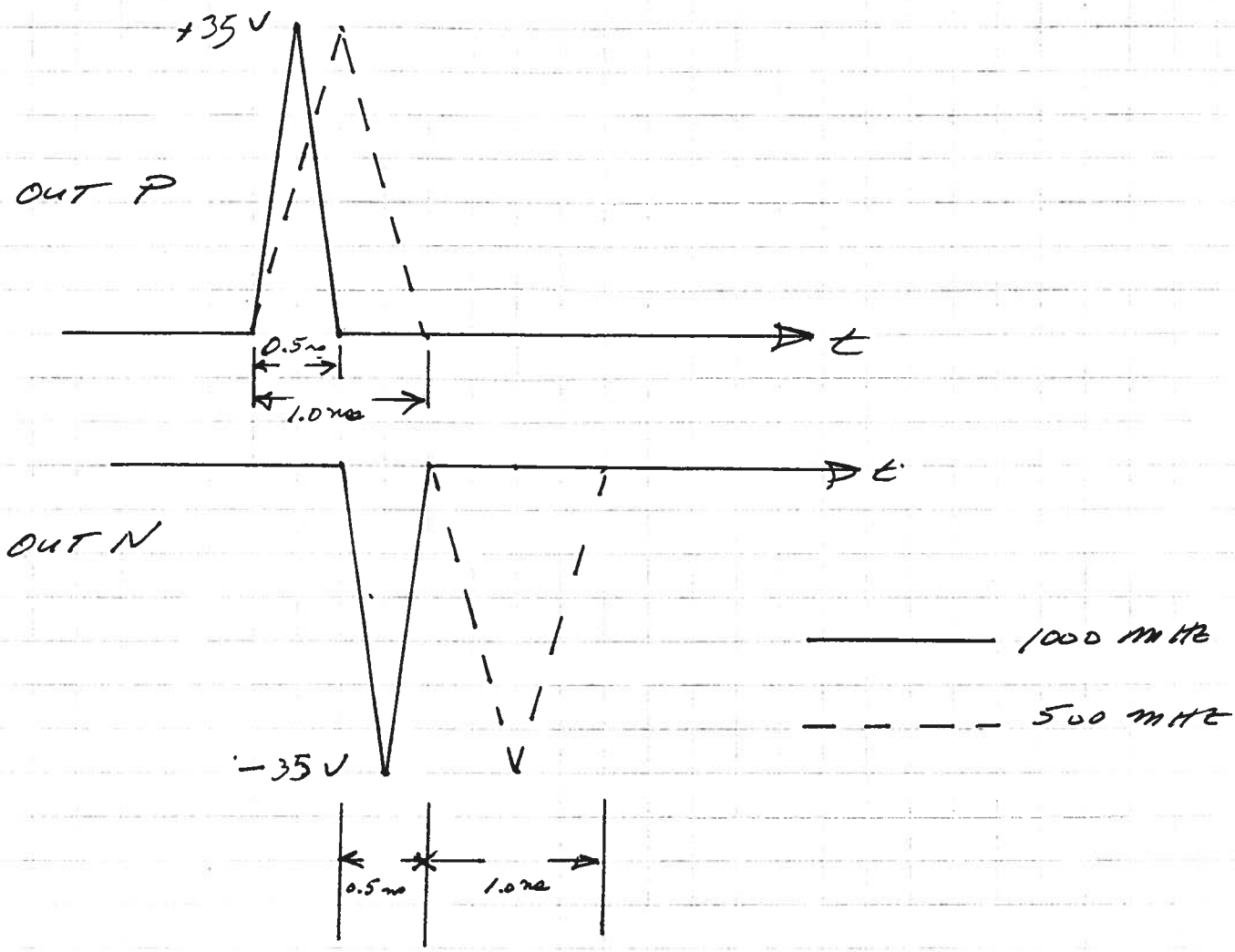
Temperature range:	0°C to 40°C.
Prime power:	+12 VDC, 200 mA max.
Package size:	1.6" x 3.0" x 6.0", Cast aluminum, blue enamel.
Weight:	1.75 lbs.
Connectors:	
Input, output:	SMA.
Power and control:	Solder terminals.
Other:	See Model AVB1-3, page 92, Cat. No. 9.
Price:	$1,392.00 US each, FOB destination.
Delivery:	60 days ARO (quantity of 1).

Thank you for your continuing interest in our products. Please call me again (1-800-265-6681) if you require any additional information.

Regards

Dr. Walter Chudobiak
Chief Engineer

WC:pr



MODEL AVB1-3-HRIA OUTPUT WAVEFORMS

Jan. 20/97

Disk: AVA, AVB

Name: B13AR1A.INS