AVTECH ELECTROSYSTEMS LTD.

NANOSECOND WAVEFORM ELECTRONICS
ENGINEERING – MANUFACTURING

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INSTRUCTIONS

MODEL AVX-S1-CNA1-MD-MI-MV BIAS TEE

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.

Fig. 1 BIAS INSERTION UNIT TEST ARRANGEMENT

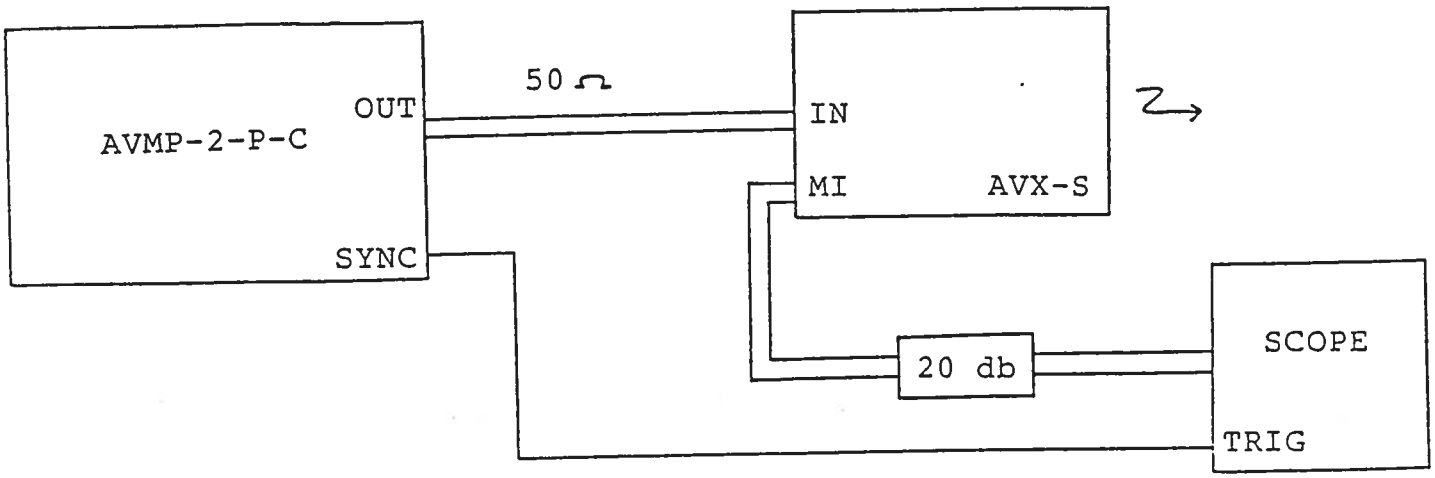
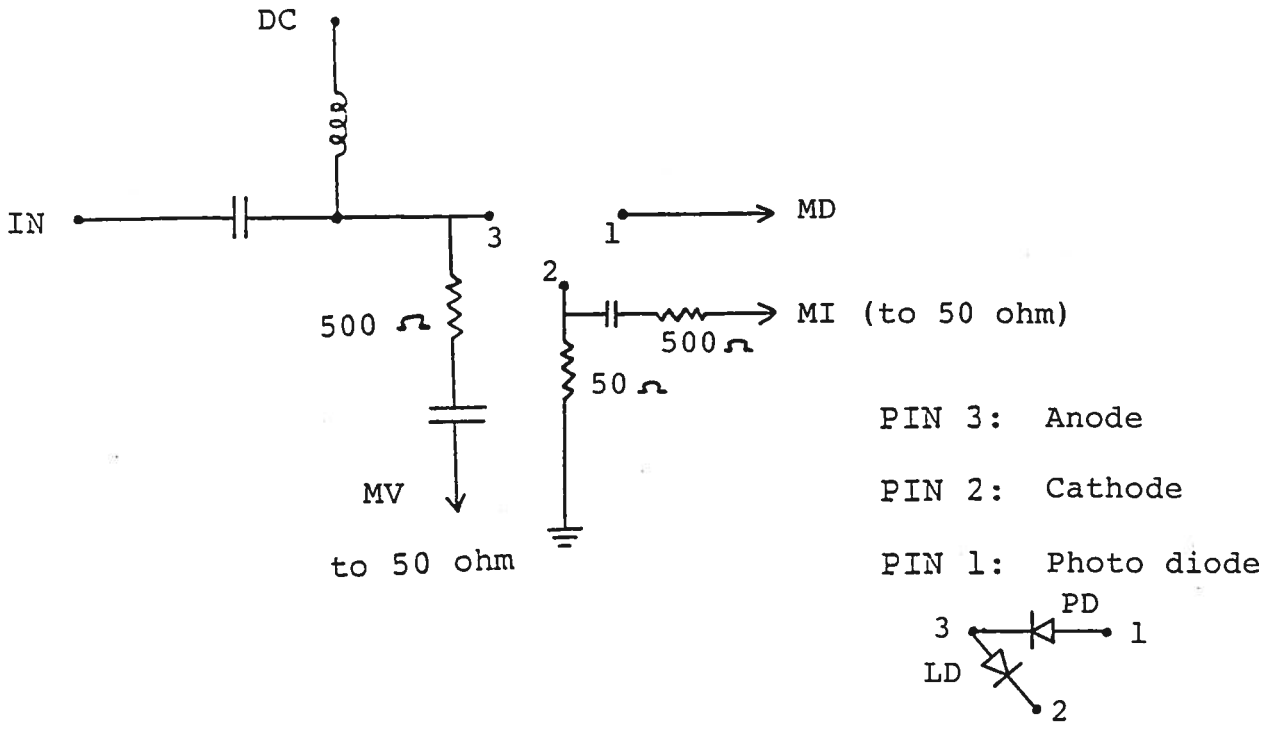


Fig. 2 FUNCTIONAL EQUIVALENT CIRCUIT



Notes:

1) The DC terminal of the bias insertion must either be shorted to ground (if a DC offset is not required) or a DC power supply must be applied. The laser diode will not function if the DC terminal is open circuited. Note that the DC current must not exceed $\pm$100 mA.

2) The MI port must be terminated into 50 ohms. Note that a 20 db (or larger) attenuator should be placed between the AVX-S MI output and the scope input since the MI output is very nearly equal to the amplitude of the input drive pulse.

3) The diode current I_D (Amps) and the MI output voltage are related as follows:

$$I_D = 0.2\ MI$$

4) The MV output port also requires a 50 ohm termination. The voltage across the laser diode (V_D) is given by the following:

$$V_D = 10\ (MV - MI)$$

where MV and MI are the voltages (into 50 ohms) at the MV and MI output ports.

5) The AVX-S input may be a sinusoid in the frequency range of 10 MHz to 1 GHz. For this mode of operation, a DC offset must be applied to the DC terminal.

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Fax No:	2664	Our Fax No:	613-226-2802
To:	Corning	Your Ref No:	
		Our Ref:	
Attn:	Richard White, MS SP DV-1-7 Tel: 607-974-3137	Date:	April 16, 1990
From:	Avtech Electrosystems Ltd.	Receivers Fax No:	607-974-3675
Subject:	Laser Diode Bias Insertion Unit	No. pages faxed:	3

With reference to my fax of April 3 and yours of April 10, I am pleased to offer a revised quotation for a special purpose laser diode bias insertion unit for the LSC0605-FC laser diode:

Model designation:	AVX-S1-CNA1.
Bandwidth:	10 MHz to 1 GHz.
Input impedance:	50 ohms (assumes a diode impedance of 3 ohms).
Input connector:	SMA.
Diode connector:	FC connector. Anode Pin 3, cathode Pin 2, photo diode Pin 1.
Photo diode output connector (-MD option):	Solder terminal.
Laser diode current monitor connector (-MI option):	SMA.
Laser diode voltage monitor connector (-MV option):	SMA.

DC bias:	0 to 100 mA. User applies required current to DC solder terminal.
Package size:	1.6" x 2.6" x 3.0" (see enclosed drawing).
Functional equivalent circuit:	See enclosed drawing.
Price:	$890.00 US each, FOB Destination.
-MD option:	$100.00 US.
-MI option:	$100.00 US.
-MV option:	$100.00 US.
Delivery:	60 days ARO.

Thank you for your continuing interest in our products.

Rgds

Walter J. Chudobiak
Chief Engineer

WJC:pr

05.30.90