AVTECH ELECTROSYSTEMS LTD.

NANOSECOND WAVEFORM ELECTRONICS
ENGINEERING – MANUFACTURING

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INSTRUCTIONS

MODEL AVX-S-IBM2-MI-MV-M 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

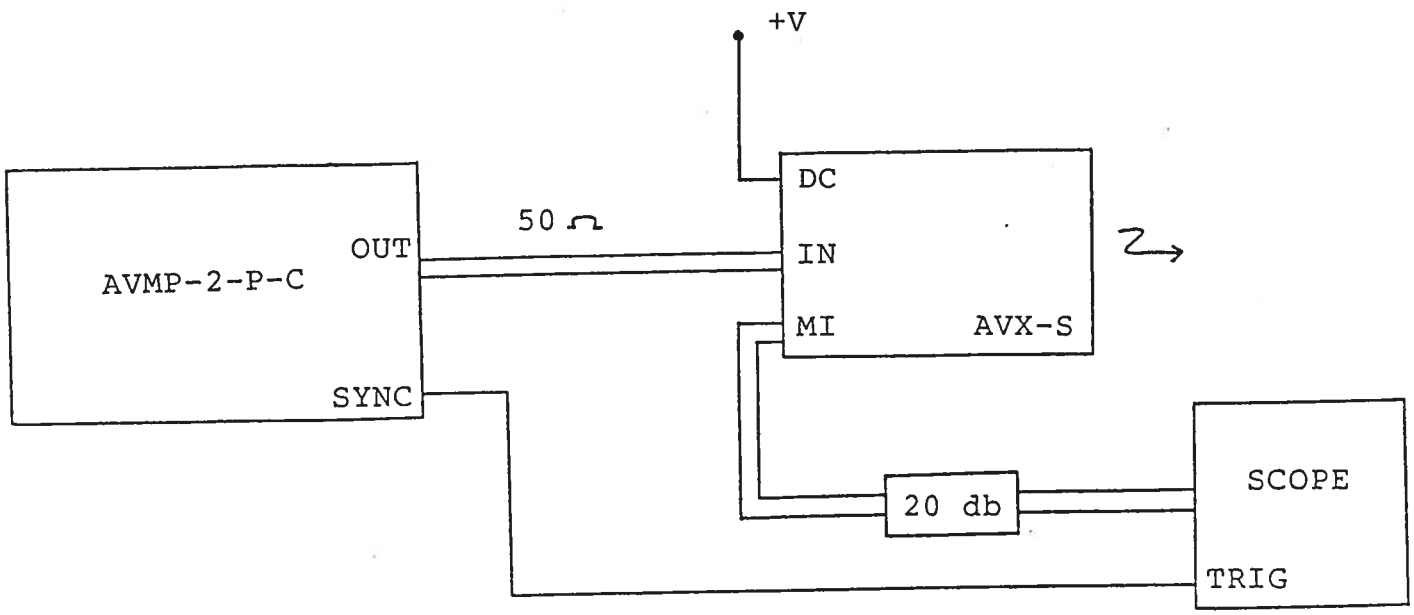
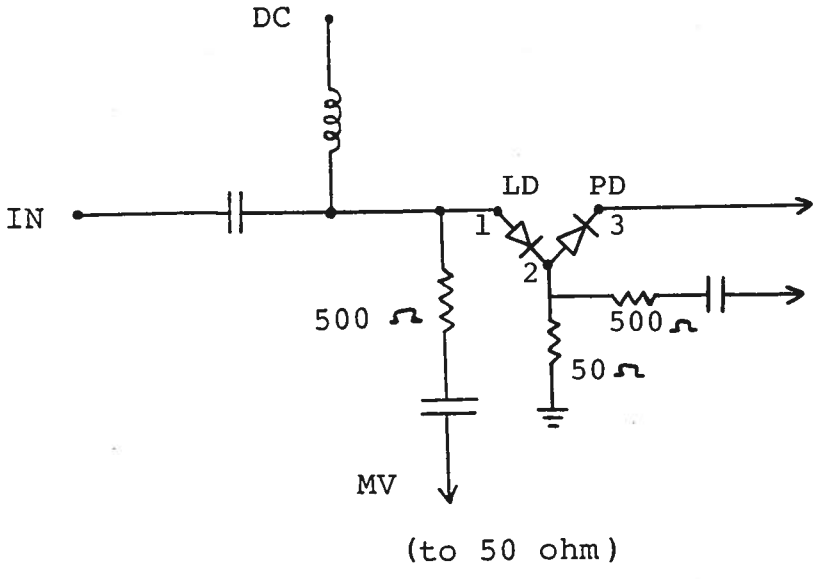


Fig. 2 FUNCTIONAL EQUIVALENT CIRCUIT



PIN 3: Photo diode

PIN 2: Cathode

PIN 1: Anode

(IBM Part No. 30 F 82 11)

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:

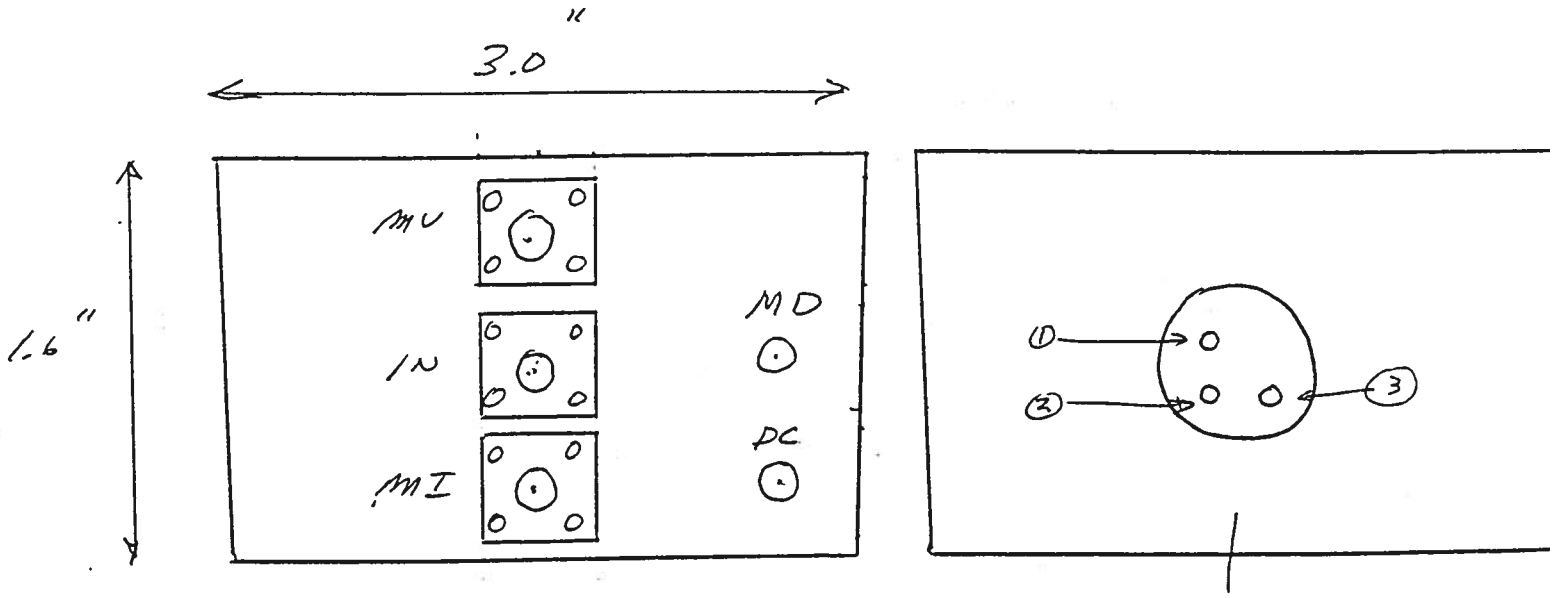
$$I_D = 0.2\ MI$$

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.



FLUSH-MOUNTED SOCKET ASSEMBLY (TD-15)

PACK ME

AVTECH ELECTROSYSTEMS LTD.

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Fax No:	2617	Our Fax No:	613-226-2802
To:	IBM Corp.	Your Ref No:	
	914-894-3853	Our Ref:	
Attn:	John Ferrario	Date:	April 2, 1990
From:	Avtech Electrosystems Ltd.	Receivers Fax No:	914-894-6891
Subject:	Quote - Laser Diode Bias Insertion Unit	No. pages faxed:	3

With reference to your fax of March 13th, I am pleased to offer the following quotation for a special purpose laser diode bias insertion unit with TO 18 socket mounting.

Model designation:	AVX-S-IBM2-MI-MV-M
Bandwidth:	10 MHz to 1 GHz.
Input impedance:	50 ohms (assumes a diode impedance of 5 ohms).
Input connector:	SMA
Diode connector:	TO 18 socket. Pin connections as per IBM Part No. 30F8211.
Photo diode output connector:	Solder terminal.
Laser diode current monitor connector:	SMA
Laser diode voltage monitor connector:	SMA
DC bias:	0 to 100 mA. User applies required current to DC solder terminal.

...../2

Package size:	1.6" x 2.6" x 3.0" (see enclosed drawing).
Functional equivalent circuit:	See enclosed drawing.
Price:	$1290.00 U.S. each. FOB: destination
Delivery:	60 days ARO

Thank you for your continuing interest in our products. Please call me again if you require any additional information or modification to the above quotation.

Rgds

Walter J. Chudobiak
Chief Engineer

WJC:sm

REL FOR ASH	QTY

TECHNICAL APPROVAL:		
ELECTRICAL		
MATERIAL		

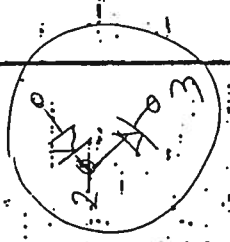
	DATE	EC NO.
REL	TBD	C21296
REV	23MAY88	REV C
REV	14OCT88	REV D
REV	19DEC88	REV E

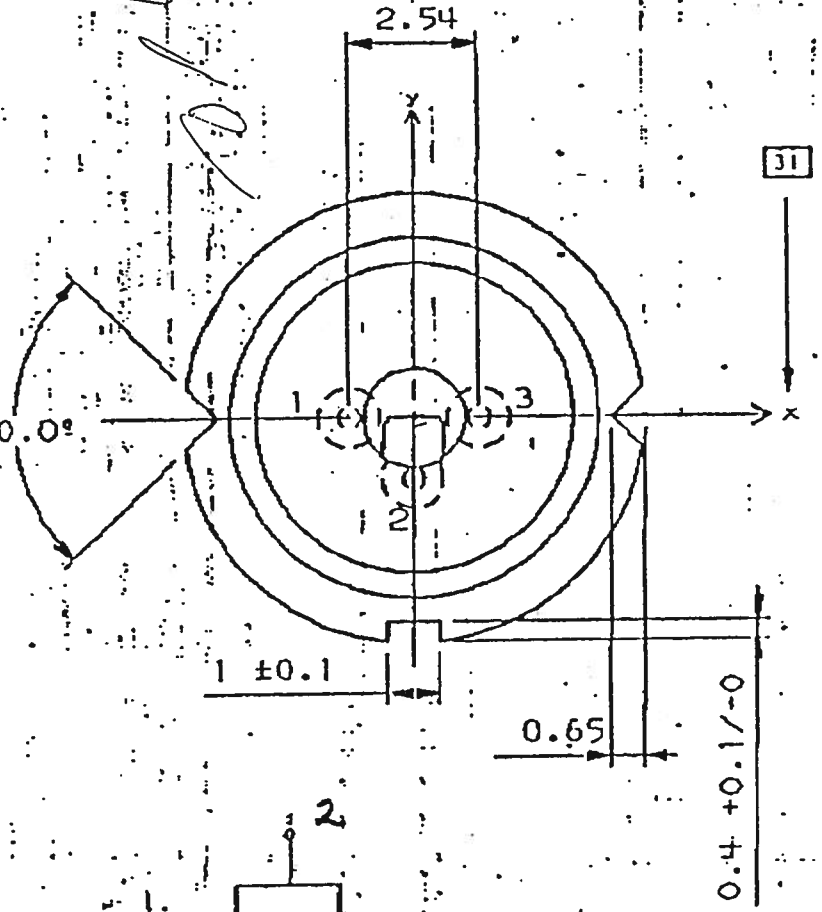
PART NO. 30F8211

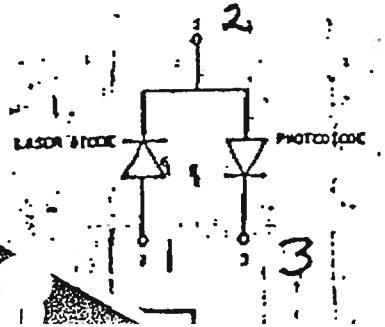
DEVELOPMENT NO. ~~TD9L30~~

Q/H

SHEET 5 OF 5







IBM MATERIAL NO.	MUST CONFORM TO ENG SPEC 2313719
MATL ALTERNATE NO.	TOLERANCES UNLESS NOTED
CASE DEPTH	± UNLESS NOTED
HARDNESS	

SIZE A3

SCALE: 10/1

THIRD ANGLE PROJECTION

THIS DOCUMENT IS THE PROPERTY OF

PART NO. 30F8211 IBM

TITLE 30 mW 830 nm LASER

MECHANIC REQUIREMENTS

DESIGNER 14OCT88

CHECKED 14OCT88

08.09.90